

BELL TELEPHONE LABORATORIES, INCORPORATED

MAY 1 1981

6-145

COMMON SYSTEMS
FOR USE WITH NO. 3 ESS
ARRANGED WITH 2-WIRE FEATURES
STORE WRITE PROTECT TEST
(CDG5WP)

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ISSUE 5
02/06/81

AT&T
SPCS

PR-1C927-50
145 PAGES

PRINTED IN U.S.A.



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SECTION DICTIONARY

NUMBER	NAME	MAXIMUM	ORIGIN	TYP	ADDRESS-MODIFICATION
01	CSTMP1	0000535		C	
02	CSTMP2	0000432		C	
03	CSTMP3	0000642		C	
04	WPTST	0000067		C	
05	CPATCH	0000000		C	
06	CPATCH1	0000723		C	
07	CPATCH2	0000000		C	
08	CPATCH3	0000000		C	
09	CPATCH7	0000000		C	
0A	TFAPCH2	0000000		C	
0B	TPATCH	0000000		C	

STORE WRITE PROTECT TEST

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00:06:56 02/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSMW

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C01

VERSION W77D OF SWAP; VERSION

OF EPL

0:06:56 2/06/81 ****

CDGSWP

W77D

0025071
0025071
0025071

```

01  DBNAM  NO33E3I3.OFF.DATABASE
02  RELNAM  NO3ESS
03  GETLIB  LIBRARY, MEMBER=MOPTBL
04  GETLIB  LIBRARY, MEMBER=SYSMAC
05  GETLIB  LIBRARY, MEMBER=SYSSM
06  GETLIB  LIBRARY, MEMBER=PATCH2
07  FIRSTOPTSS
08  VERSION 3ACC, FIELD, ESS2E
09  PATCHINIT
10  NO33E3I3.OFF.OPMS(0) DECK
11  DSQUAL  NO33E3I3
12  LISTING  N, CRUNCH=Y, SYSOUT=N
13  #####
14  ##
15  ## UNIX ID = NO3PAG
16  ##
17  #####
18  #####
19  ##
20  ## pid date time rel
21  ##
22  ## cdgswp 1/24/81 17:40:04 7.1.1.1
23  ##
24  #####

```

31 # THIS DATA SET EDITED FOR UNIX ON 05/25/78

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CDGSWP

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CDGSWP W77D

01 GETLIB MEMBER=MEMDGM
02 GETLIB MEMBER=TTYMAC
03 GETLIB MEMBER=CTVTAB
04 GETLIB MEMBER=BSAIMAC
05 GETLIB MEMBER=BSAIMAC
06 GETLIB MEMBER=DGNMAC # SELECT FIELD MACROS
07 NAME CDGSWP

11 ## The following is a list of the valid csects for program CDGSWP

0025071
0025026
0026260
0025002

13 CSTWP1 CSECT
14 CSTWP2 CSECT
15 CSTWP3 CSECT
16 WPTST CSECT

19 ## The following csects are necessary for patching

0111432
0112562
0114107
0115073
0121236

21 CPATCH CSECT
22 CPATCH1 CSECT
23 CPATCH2 CSECT
24 CPATCH3 CSECT
25 CPATCH7 CSECT

0116774

27 TFAPCH2 CSECT

0600000

29 TPATCH CSECT

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E01

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CD6SWP

W77D

0600000

```

01 BEGIN_DIAG DGSWP,3ACC # RUN ON 3ACC
-001- 02 CDGNM EXTERN NMICRO
-001- 03 CDGNM EXTERN NRETRN
-001- 04 CDGNM EXTERN NZRETRN
-001- 05 CDGNM EXTERN NSTRT
-001- 06 CDGNM EXTERN NSTOP
-001- 07 CDGNM EXTERN NDISABA
-001- 08 CDGNM EXTERN NDISABB
-001- 09 CDGNM EXTERN NSTRTCLK
-001- 10 CDGNM EXTERN NSTPCLK
-001- 11 CDGNM EXTERN NTGCLK
-001- 12 CDGNM EXTERN NRESCLK
-001- 13 CDGNM EXTERN NZERO_ER
-001- 14 CDGNM EXTERN NPROS
-001- 15 CDGNM EXTERN NTESTSEG
-001- 16 CDGNM EXTERN NFAILTST
-001- 17 CDGNM EXTERN NTTY
-001- 18 CDGNM EXTERN NMASK
-001- 19 CDGNM EXTERN NPASSTST
-001- 20 CDGNM EXTERN NSEND
-001- 21 CDGNM EXTERN NZSEND
-001- 22 CDGNM EXTERN NADD_OFF
-001- 23 CDGNM EXTERN NADMIC
-001- 24 CDGNM EXTERN NLDIMR
-001- 25 CDGNM EXTERN NEXECUTE
-001- 26 CDGNM EXTERN NCOMPARE
-001- 27 CDGNM EXTERN NFRZ
-001- 28 CDGNM EXTERN NBEGIN
-001- 29 CDGNM EXTERN NLP_END
-001- 30 CDGNM EXTERN NSKIP
-001- 31 CDGNM EXTERN NABT
-001- 32 CDGNM EXTERN NRDIMCRO
-001- 33 CDGNM EXTERN NCLRMS
-001- 34 CDGNM EXTERN NNO3CD
-001- 35 CDGNM EXTERN NTWTEST
-001- 36 CDGNM EXTERN NZERTPT
-001- 37 CDGNM EXTERN NFLBITS
-001- 38 CDGNM DIRECT INTRPNO3
-001- 39 CDGNM EXTERN NBGN
-001- 40 CDGNOF EXTERN PASSOFF
-001- 41 CDGNOF EXTERN FAILOFF
-001- 42 CDGNM EXTERN SLMCHDF
-001- 43 CDGNM EXTERN SLMIRLF
-001- 44 CDGNM EXTERN SMCHF
-001- 45 CDGNM EXTERN NRINBLM
-001- 46 CDGNM EXTERN NNDTST

```

STORE WRITE PROTECT TEST

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CDGSWP W77D

-001- 01 # THIS DIAGNOSTIC PROGRAM IS ALL OR PARTIALLY WRITTEN IN A MACRO
-001- 02 # LANGUAGE WHICH PRODUCES TABLES WHICH ARE INTERPRETED BY THE
-001- 03 # DIAGNOSTIC MONITOR PROGRAM. FOR INFORMATION REGARDING THE
-001- 04 # STRUCTURE OF THE TABLES, SEE THE SECTION OF PROGRAM CDGNH (PR-1C910-01)
-001- 05 # ENTITLED "DIAGNOSTIC TABLE INTERPRETER", FOR A GENERAL DESCRIPTION
-001- 06 # OF THE DIAGNOSTIC PHILOSOPHY AND THE DETAILED REPAIR PROCEEDURE,
-001- 07 # SEE THE TROUBLE LOCATION MANUAL (TLM-1C900) SECTION B.

STORE WRITE PROTECT TEST

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CDGSMW

W77D

0600000

01

SYMLIB

STORE WRITE PROTECT TEST

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CDGSWP

W77D

-002- 01 # EXTERNS REQUIRED BY STORE DIAGNOSTIC TESTS:

-002- 04 MASACS EXTERN MASCIOSC

-002- 06 CBLM EXTERN PRTHASER

-002- 07 CBLM EXTERN WAIT

-002- 09 CDGNM EXTERN LOOPIND

-002- 10 CDGNM EXTERN NOSTPMES

-002- 11 CDGNM EXTERN PASSST

-002- 12 CTSD EXTERN DGNLIM

-002- 14 CDGSBS EXTERN MEMOP

-002- 15 CDGSBS EXTERN MEMOPI

-002- 17 CDGSFA EXTERN FOBNDX

-002- 19 CDGSIO DIRECT MASIOM

-002- 20 CDGSIO EXTERN MDSLSMSK

-002- 21 CDGSIO EXTERN MODSIZE

-002- 22 CDGSIO EXTERN STRSIZE

-002- 23 CDGSIO EXTERN STSLSMSK

-002- 24 CDGSIO EXTERN FINAL

-002- 25 CDGSIO EXTERN CONTPREP

-002- 28 CSYSUB EXTERN EXCOFLPG

-002- 29 CSYSUB EXTERN INIT_OCC

-002- 30 CSYSUB EXTERN INITOST

-002- 31 CSYSUB EXTERN INSYNC

-002- 32 CSYSUB EXTERN RGCHKADR

-002- 33 CSYSUB EXTERN UPD_OTS

-002- 35 CTSD EXTERN MASERCNT

-002- 36 CTSD EXTERN PAGSCR

-002- 37 CTSD EXTERN DGREQ

-002- 39 MASACS EXTERN MASONOFF

-002- 41 TDATA EXTERN STRLIM

-002- 42 TDATA EXTERN WDSTR

-002- 43 TDATA EXTERN WPTBL

STORE WRITE PROTECT TEST

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-002- 01 # STORE DIAGNOSTIC REGISTER DEFINITIONS

0000010	-002- 04 CHKNDX EQU	8	# INDEX REGISTER FOR REFRESH SELECT CHECK
0000010	-002- 05 F0BCNT EQU	8	# SCRATCH REG FOR CURRENT FANOUT BOARD COUNT
0007011	-002- 07 RANGE EQU	9	# NUMBER OF OFF-LINE WORDS TO BE TESTED

-002- 11 # REGISTER SYMBOLS USED IN THE MEMORY MODULE TEST:

0000000	-002- 12 PATBAK EQU	R0	# DATA READ/Written VIA OTHER-STORE
0000001	-002- 13 HIPATBAK EQU	R1	# HIGH DATA READ/Written VIA OTHER-STORE
	-002- 14 HIPATBAKXT SYN	R1XT	# DEFINE FOR IGNORANT NIMODE MACRO
0000002	-002- 15 BLKMSK EQU	R2	# MASK TO BLOCK INTERRUPTS & CHECKS
0000003	-002- 16 STRSTAT EQU	R3	# SAVE (WIDE) STORE STATUS
0000004	-002- 17 LSTPAT EQU	R4	# PATTERN PREVIOUSLY WRITTEN
0000005	-002- 18 NXTPAT EQU	R5	# PATTERN CURRENTLY BEING WRITTEN
0000006	-002- 19 PATNDX EQU	R6	# NUMBER OF TEST PATTERN BEING MATCHED
0000007	-002- 20 MMRNDX EQU	R7	# MEMOR LOOP INDEX
0000010	-002- 21 ERSAVE EQU	R8	# ERROR REGISTER AFTER OTHER-STORE READ
0000010	-002- 22 PARSLT EQU	R8	# PARITY TEST RESULTS - FIELD ONLY
0000014	-002- 23 MEMADDR0 EQU	R12	# UPPER ADDRESS BITS OF MEMORY TEST AREA
0000015	-002- 24 MEMADDR1 EQU	R13	# LOWER ADDRESS BITS OF MEMORY TEST AREA
0000014	-002- 25 MEHADDR EQU	RA0	# BASE ADDRESS OF MEMORY TEST AREA
0000016	-002- 26 PATADDR EQU	RA1	# ADDRESS OF TEST PATTERN TABLE

STORE WRITE PROTECT TEST

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CDGSWP

W77D

-002- 01 # FUNCTION OF BITS WITHIN I/O MESSAGE SENT TO STORE:
 -002- 02 CIOBUF LAYOUT

-002- 05 CINIT	ITEM	1	# MAIN STORE CONTROLLER INITIALIZATION
-002- 06 CKSTP	ITEM	1	# CONTROLLER CLOCK STEP
-002- 07 CKHLT	ITEM	1	# CONTROLLER CLOCK HALT
-002- 08 REFST	ITEM	1	# STORE REFRESH STOP
-002- 09 STORER	ITEM	8	# 4/8 MAINTENANCE STATE CODE
-002- 10 O10TH	ITEM	1	# 0-10 BIT TIMING SHIFTER FAKE
-002- 11 LDFG	ITEM	1	# ORDER CHECKER EXCLUSIVE-OR LOAD
-002- 12 FSEL	ITEM	1	# STORE SELECT FORCE ON TIMING BOARD A
-002- 13 FBT09	ITEM	1	# FORCE BIT 15 ACTIVE IN MAIN SHIFTER
-002- 14	LOEND		
-002- 15	#		

CIOBUF										STORER								REFST								CKHLT		CKSTP		CINIT	
001	FBT09	FSEL	LDFG	O10TH																											
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0															

STORE WRITE PROTECT TEST

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D02

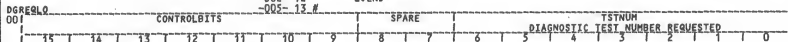
0:06:56 2/06/81 ****

CDGSWP

W77D

-002- 01 # LAYOUT OF DIAGNOSTIC REQUEST WORD (DGREQ) WITH TEST NUMBER REQUESTED
 -002- 02 # NOTES: 1. REST OF BITS (CONTROLBITS) ARE DEFINED BY DGREQIP LAYOUT
 -002- 03 # FOUND IN PROLOGUE OF DIAGNOSTIC MONITOR (CDGNM)
 -002- 04 # 2. IF TEST NUMBER (TSTNUM) IS ZERO, THE ENTIRE DIAGNOSTIC
 -002- 05 # TEST SEQUENCE HAS BEEN REQUESTED
 -002- 06 # 3. STORAGE SPACE FOR DGREQ IS ALLOCATED IN CTSD

-002- 09 TSTNUM ITEM 7 # DIAGNOSTIC TEST NUMBER REQUESTED
 -002- 10 SPARE ITEM 2
 -002- 11 CONTROLBITS ITEM 7
 -002- 12 LOEND
 -002- 13 #



STORE WRITE PROTECT TEST

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CDGSWP

W77D

-002- 01 # STORAGE FORMAT FOR MAIN STORE (MY & OTHER) SUBCHANNEL ADDRESS:

-002- 04	MSSCO	ITEM	16	#	ADDRESS OF MY STORE SUBCHANNEL 0
-002- 05	OSSCO	ITEM	16	#	ADDRESS OF OTHER STORE SUBCHANNEL 0
-002- 06	MSSC1	ITEM	16	#	ADDRESS OF MY STORE SUBCHANNEL 1
-002- 07	OSSC1	ITEM	16	#	ADDRESS OF OTHER STORE SUBCHANNEL 1
-002- 08	MSSC2	ITEM	16	#	ADDRESS OF MY STORE SUBCHANNEL 2
-002- 09	OSSC2	ITEM	16	#	ADDRESS OF OTHER STORE SUBCHANNEL 2
-002- 10	MSSC3	ITEM	16	#	ADDRESS OF MY STORE SUBCHANNEL 3
-002- 11	OSSC3	ITEM	16	#	ADDRESS OF OTHER STORE SUBCHANNEL 3
-002- 12					LOEND
-002- 13	#				

MASCIOSC

00	-----	MSSCO	-----
01	-----	ADDRESS OF MY STORE SUBCHANNEL 0	-----
02	-----	OSSCO	-----
03	-----	ADDRESS OF OTHER STORE SUBCHANNEL 0	-----
04	-----	MSSC1	-----
05	-----	ADDRESS OF MY STORE SUBCHANNEL 1	-----
06	-----	OSSC1	-----
07	-----	ADDRESS OF OTHER STORE SUBCHANNEL 1	-----
08	-----	MSSC2	-----
09	-----	ADDRESS OF MY STORE SUBCHANNEL 2	-----
10	-----	OSSC2	-----
11	-----	ADDRESS OF OTHER STORE SUBCHANNEL 2	-----
12	-----	MSSC3	-----
13	-----	ADDRESS OF MY STORE SUBCHANNEL 3	-----
14	-----	OSSC3	-----
15	-----	ADDRESS OF OTHER STORE SUBCHANNEL 3	-----

STORE WRITE PROTECT TEST

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CDGSWP

W77D

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-002- 01 # WORDS IN PAGING BUFFER USED BY STORE  # DIAGNOSTIC TESTS:
-002- 02 LOOPSUB ITEM 16  # ADDRESS OF SUBSTITUTE FOR 'LOOP' IN TTY
                                # TROUBLE MESSAGE
-002- 04 IOADDR ITEM 16  # I/O SUBCHANNEL ADDRESS FOR CURRENT
                                # STORE CONTROL
-002- 06 F0BNUM ITEM 16  # NUMBER OF MEMORY MODULES (OR FANOUT
                                # BOARDS) IN STORE CURRENTLY UNDER TEST
-002- 08 TINSV ITEM 16  # SAVE TIMING CONSTANT FOR TIMEOUT
                                # SUBROUTINE
-002- 10 UPADDR ITEM ADDR  # ADDRESS OF NEXT BLOCK OF MEMORY TO BE
                                # UPDATED AFTER MEMORY PATTERN TEST
-002- 12 BASADDR ITEM ADDR  # BASE ADDRESS OF STORE/MOD UNDER TEST

```

-002- 15 LOEND

-005- 16 #

LOOPSUB

ADDRESS OF SUBSTITUTE FOR 'LOOP' IN TTY TROUBLE MESSAGE

IOADDR

I/O SUBCHANNEL ADDRESS FOR CURRENT STORE CONTROLLER

FOBNUM

NUMBER OF MEMORY MODULES (OR FANOUT BOARDS) IN STORE CURRENTLY UNDER TEST

TIMSAY

SAVE TIMING CONSTANT FOR TIMEOUT SUBROUTINE

UPADDR

BASAADR

STORE WRITE PROTECT TEST

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COGSWP

W77D

-002- 01 # STORE ERROR REGISTER (SER) BIT ASSIGNMENT:
 -002- 02 # NOTE: THESE INPUTS ARE ENABLED BY BIT09 OF THE MAIN SHIFTER

-002- 05 SER LAYOUT
 -002- 06 F0TERB ITEM 1 # STORE TIMING ERROR FROM UNSELECTED F0B
 -002- 07 MPXR ITEM 1 # MULTIPLEXOR ERROR DETECTED BY CHECK BOARD
 -002- 09 CHDIF ITEM 1 # ERROR INDICATED BY STORE COMMAND CHECKER
 -002- 11 SCMER ITEM 1 # PR^MATURE STORE COMPLETE(SCM)
 -002- 12 SHER ITEM 1 # ERROR IN MAIN SHIFTER OPERATION
 -002- 13 MODER ITEM 1 # ALL-SEEMS-WELL SIGNAL NOT RECEIVED FROM MODULE(F0B) ACCESSED DURING NORMAL CYCL
 -002- 15 RSELER ITEM 1 # ALL MEMORY MODULES(F0BS) NOT SELECTED DURING REFRESH
 -002- 17 F0TERA ITEM 1 # STORE TIMING ERROR FROM SELECTED F0B
 -002- 18 F0PARER ITEM 1 # PARITY ERROR DETECTED IN ADDRESS REACHING FANOUT BOARD(S)
 -004- 20 ##### F0PARER WILL APPEAR AS F0PARE IN PICTURES
 -002- 21 DNPER ITEM 1 # ERROR IN PARITY OVER HIGH DATA BITS
 -002- 22 PWER ITEM 1 # ERROR IN PARITY FOR WIDE STORE
 -002- 23 TBER ITEM 1 # ERROR DETECTED ON TIMING BOARD
 -002- 24 ITEM 1 # SPARE
 -002- 25 DLPER ITEM 1 # ERROR IN PARITY OVER LOW DATA BITS
 -002- 26 ITEM 1 # SPARE
 -002- 27 ITEM 1 # RESERVED
 -002- 28 LOEND
 -002- 29 #

SER	001	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
		SPARE		DLPER	SPARE	TBER	PWER	DNPER	F0PARE	F0TERA	RSELER	MODER	SHER	SCMER	CHDIF	MPXR	F0TERB

STORE WRITE PROTECT TEST

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-002- 01 # STORE BUS CHECK BIT ASSIGNMENTS IN RESPONSE MESSAGE:
-002- 02 #     NOTE: THESE INPUTS ARE ENABLED BY ISOLATE CHECK(ISOCHK) I/O ORDER
-002- 03 #           W/ LOAD F & G(LDFG) OPTION SET
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-002- 06 ISOBTS ITEM 7 # S00-6,S08-14 ISOLATE TEST RESULTS
-002- 07 RSVBD ITEM 1 # S07,S15 ISOLATE TEST RESULT - ONLY
      GATED INTO BY LOAD I/O DECODER CHECK
      (LOADCHK) OPTION
-002- 10 WDISOL ITEM 4 # RESULTS OF WIDE DATA(S016-23) ISOLATE
-002- 11 SPCKC ITEM 1 # RESULT OF STORE DATA PARITY ISOLATION
-002- 12 ZEPKC ITEM 1 # RESULT OF EXTENDED(3 BIT) PARITY
      ISOLATE
-002- 14 CTRLCK ITEM 1 # RLSULT OF STORE CONTROL LEADS ISOLATION
-002- 15 FXORG ITEM 1 # I/O ORDER CHECKER EXCLUSIVE-OR RESULT
-002- 16 LOEND
-002- 17 #

```

CHKWRD

001	FXORG	ICTRLCK	2EPCK	SDPCK	WDISOL	RSVDO	ISOBTS
15	14	13	12	11	10	9	8
1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88
89	90	91	92	93	94	95	96
97	98	99	100	101	102	103	104
105	106	107	108	109	110	111	112
113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128
129	130	131	132	133	134	135	136
137	138	139	140	141	142	143	144
145	146	147	148	149	150	151	152
153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168
169	170	171	172	173	174	175	176
177	178	179	180	181	182	183	184
185	186	187	188	189	190	191	192
193	194	195	196	197	198	199	200
201	202	203	204	205	206	207	208
209	210	211	212	213	214	215	216
217	218	219	220	221	222	223	224
225	226	227	228	229	230	231	232
233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248
249	250	251	252	253	254	255	256
257	258	259	260	261	262	263	264
265	266	267	268	269	270	271	272
273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288
289	290	291	292	293	294	295	296
297	298	299	300	301	302	303	304
305	306	307	308	309	310	311	312
313	314	315	316	317	318	319	320
321	322	323	324	325	326	327	328
329	330	331	332	333	334	335	336
337	338	339	340	341	342	343	344
345	346	347	348	349	350	351	352
353	354	355	356	357	358	359	360
361	362	363	364	365	366	367	368
369	370	371	372	373	374	375	376
377	378	379	380	381	382	383	384
385	386	387	388	389	390	391	392
393	394	395	396	397	398	399	400
401	402	403	404	405	406	407	408
409	410						

STORE WRITE PROTECT TEST

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CDGSWP

W77D

-002- 01 # REFRESH SELECT CHECK BIT ASSIGNMENTS IN STORE ERROR REGISTER
 -002- 02 # NOTE: THESE INPUTS ARE ENABLED BY EXTERNAL-ERROR-LOAD(EXERLD) ORDER

-002- 05 RSEL06 ITEM 7 # REFRESH SELECTS FROM FANOUT BOARDS 0-6
 -002- 06 RSVD1 ITEM 1 # RESERVED - F0BTERA IS SET AFTER INIT
 -002- 07 SAPHLP ITEM 1 # STORE ADDRESS PARITY HIGH LOOP RESULT
 -002- 08 SA17LP ITEM 1 # STORE ADDRESS BIT 17 LOOP RESULT
 -002- 09 STRSLP ITEM 1 # STORE SELECT ADDRESS BITS LOOP RESULT
 -002- 10 ITEM 1 # SPARE
 -002- 11 RSEL7 ITEM 1 # REFRESH SELECT FROM FANOUT BOARD 7
 -002- 12 ITEM 3 # SPARE BITS
 -002- 13 LOEND
 -002- 14 #

RSCHK	SPARE BITS				RSEL7	SPARE	STRSLP	SA17LP	SAPHLP	RSVD1	RSEL06						
001	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	

0010177 -002- 22 RSELBTS EQU M(RSEL06)M(RSEL7) # MASK FOR REFRESH SELECT BITS
 0167600 -002- 23 RSELBTSN EQU (~RSELBTS)&&(11111111111111111111)

STORE WRITE PROTECT TEST

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CDGSWP W77D

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-002- 01 # STORE STATUS REGISTER LAYOUT -- INCL BITS USED IN FIELD VERSION(S) OF TESTS
-002- 02 PLBAK ITEM 1 # PARITY LOW VALUE READ BACK
-002- 03 PHBAK ITEM 1 # PARITY HIGH VALUE READ BACK
-002- 04 ITEM 2 # UNUSED
-002- 05 OWDSTRO ITEM 1 # WIDE STORE INDICATOR BIT
-002- 06 SNGBTERR ITEM 1 # SINGLE BIT ERROR FLAG
-002- 07 PASBT ITEM 1 # REPEAT PASS THRU TEST INDICATOR
-002- 08 ITEM 9 # UNUSED
-002- 09 LOEND
-002- 10 #

```

STRSTAT

001

UNUSED											PASBT	SNGBTERR	OWDSTRO	UNUSED		PHBAK	PLBAK
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0		

STORE WRITE PROTECT TEST

PR-1C927-50

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CDGSMF

W77D

-002- 01 # STORE DIAGNOSTIC SYMBOL LIBRARY:

```

0000000 -002- 05 BIT0 EQU 0
0000001 -002- 06 BIT1 EQU 1
0000002 -002- 07 BIT2 EQU 2
0000003 -002- 08 BIT3 EQU 3
0000004 -002- 09 BIT4 EQU 4
0000005 -002- 10 BIT5 EQU 5
0000006 -002- 11 BIT6 EQU 6
0000007 -002- 12 BIT7 EQU 7
0000010 -002- 13 BIT8 EQU 8
0000011 -002- 14 BIT9 EQU 9
0000012 -002- 15 BIT10 EQU 10
0000013 -002- 16 BIT11 EQU 11
0000014 -002- 17 BIT12 EQU 12
0000015 -002- 18 BIT13 EQU 13
0000016 -002- 19 BIT14 EQU 14
0000017 -002- 20 BIT15 EQU 15
0000020 -002- 21 BIT16 EQU 16
0000021 -002- 22 BIT17 EQU 17
0000022 -002- 23 BIT18 EQU 18
0000023 -002- 24 BIT19 EQU 19
0000004 -002- 25 FOUR EQU 4
-002- 26 IOBRK TEXT 'I&'
0000000 -002- 27 MOD0 EQU 0
0000001 -002- 28 MOD1 EQU 1
0000002 -002- 29 MOD2 EQU 2
0000003 -002- 30 MOD3 EQU 3
0000004 -002- 31 MOD4 EQU 4
0000005 -002- 32 MOD5 EQU 5
0000006 -002- 33 MOD6 EQU 6
0000007 -002- 34 MOD7 EQU 7
0000001 -002- 35 ONE EQU 1
-002- 36 ONES EQU 0(177777)
0000200 -002- 37 OFLNCHNK EQU B(10000000)
0007760 -002- 38 OFLNDONE EQU B(111111110000)

```

DELIMITERS FOR I/O ORDER STRINGS

```

# ALL ONE'S REGISTER
# ON-LINE TESTS 128 WORDS/MINOR LOOP
# SIGNAL THAT OFF-LINE MEMORY TEST IS
  DONE

```

```

-002- 41 # NOTE: THE FOLLOWING CONSTANTS ALLOW GENERATION OF ARBITRARY PARITY. APPLICABLE
-002- 42 # BITS ARE 0 & 1 SUCH THAT BIT 0 = VALUE FOR PARITY LOW
-002- 43 # BIT 1 = VALUE FOR PARITY HIGH
-002- 44 # DATA BITS (23-16)(15-8) (7-0)
0000020 -002- 45 PRHOLD EQU B(10000) # SET PARITY (WIDE=)HIGH=0 LOW=0
0000005 -002- 46 PRHOL1 EQU B(00101) # SET PARITY (WIDE=)HIGH=0 LOW=1
0000012 -002- 47 PRH1LO EQU B(01010) # SET PARITY (WIDE=)HIGH=1 LOW=0
0000017 -002- 48 PRH1L1 EQU B(01111) # SET PARITY (WIDE=)HIGH=1 LOW=1
0000002 -002- 49 PRWH1LO EQU B(00010) # SET PARITY WIDE=0 HIGH=1 LOW=0

```

0600000

STORE WRITE PROTECT TEST

PR-1C927-50

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CDGSWP W77D

```

0000007 -002- 01 PRW0H1L1 EQU 8(00111) # SET PARITY WIDE=0 HIGH=1 LOW=1
0000010 -002- 02 PRW1H0L0 EQU 8(01000) # SET PARITY WIDE=1 HIGH=0 LOW=0
0000015 -002- 03 PRW1H0L1 EQU 8(01101) # SET PARITY WIDE=1 HIGH=0 LOW=1

0000003 -002- 05 THREE EQU 3
0000002 -002- 06 TWO EQU 2
0010000 -002- 07 WPBLKSZE EQU 0(10000) # WRITE PROTECT BLOCK SIZE = 4K (4096)
0000000 -002- 08 ZERO EQU 0 # ZERO CONSTANT
0000000 -002- 09 ZEROS EQU 0 # VALUES FOR
0000000 -002- 10 0TEST EQU 0 # TEST MACRO
0000001 -002- 11 1TEST EQU 1

```

```

-002- 18 # MAIN MEMORY STATUS CONSTANTS ASSUMING FOLLOWING CONDITIONS:
-002- 19 # 1. MY STORE BUS PORT IS ISOLATED FROM INPUT FROM OTHER PROCESSOR
-002- 20 # 2. MAIN MEMORY CONTROLLER IS NOT UPDATING OTHER STORE
-002- 21 # 3. MY STORE BUS PORT IS ACCESSING MY STORE, E. NOT REVERSED

```

```

0106263 -002- 24 MTCRD EQU 0(106263) # MAIN MEMORY STATUS FOR MAINTENANCE READ
                                         OPERATION
0106203 -002- 26 MTCWR EQU 0(106203) # MAIN MEMORY STATUS FOR MAINTENANCE
                                         WRITE OPERATION
0106260 -002- 28 NMLRD EQU 0(106260) # MAIN MEMORY STATUS FOR NORMAL READ
                                         OPERATION
0106200 -002- 30 NMLWR EQU 0(106200) # MAIN MEMORY STATUS FOR NORMAL WRITE
                                         OPERATION
0106274 -002- 32 SPRRD EQU 0(106274) # MAIN MEMORY STATUS FOR SPARE READ
                                         OPERATION
0106214 -002- 34 SPRWR EQU 0(106214) # MAIN MEMORY STATUS FOR SPARE WRITE
                                         OPERATION

```

STORE WRITE PROTECT TEST

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CDGSMW

W77D

-002- 01 # MAIN STORE I/O ORDERS:

0020016	-002- 04 ALLZERO EQU	0(20016)
	-002- 05 ALLZEROT TEXT	'APPLY ERRONEOUS ORDER(0/8) TO CHECKER'
0063476	-002- 06 BADCODE EQU	0(63476)
	-002- 07 BADCODET TEXT	'APPLY ERRONEOUS ORDER(5/8) TO CHECKER'
0047214	-002- 08 BUSCHK EQU	0(47214)
	-002- 09 BUSCHKT TEXT	'CHECK BUS ISOLATION USING SER'
0040374	-002- 10 CKTINIT EQU	0(40374)
		# STORE CONTROLLER INITIALIZATION (W/O WRITE PROTECT CLEAR)
	-002- 12 CKTINITT TEXT	'INITIALIZE ALL STORE CONTROLLER CIRCUITS'
0043310	-002- 13 CLRSER EQU	0(43310)
	-002- 14 CLRSERT TEXT	'CLEAR STORE ERROR REGISTER'
0046074	-002- 15 CLKSTOP EQU	0(46074)
	-002- 16 CLKSTOPT TEXT	'DISABLE STORE CONTROLLER CLOCK OUTPUT'
0046070	-002- 17 CLKSTRT EQU	0(46070)
	-002- 18 CLKSTRTT TEXT	'ENABLE STORE CONTROLLER CLOCK OUTPUT'
0146074	-002- 19 ERCOLL EQU	0(146074)
	-002- 20 ERCOLLT TEXT	'COLLECT ERRORS IN STORE ERROR REG'
0145454	-002- 21 EXERLD EQU	0(145454)
		# FAST REFRESH WITH REFRESH & CLOCK STOPPED
	-002- 23 EXERLDT TEXT	'ENABLE EXTERNAL LOAD OF STORE ERROR REG'
0145454	-002- 24 EXLDB15 EQU	0(145454)
	-002- 25 EXLDB15T TEXT	'ENABLE EXTERNAL LOAD OF STORE ERROR REG W/ ERROR COLLECT OPTION'
0005440	-002- 26 FASTREF EQU	0(5440)
	-002- 27 FASTREFT TEXT	'PERFORM FAST REFRESH ON STORE'
0045454	-002- 28 FASTRNC EQU	0(45454)
	-002- 29 FASTRNC T TEXT	'FORCE FAST REFRESH W/O CLOCK'
0145454	-002- 30 FFRMB15 EQU	0(145454)
	-002- 31 FFRMB15T TEXT	'FORCE FAST REFRESH & BIT 15'
0146074	-002- 32 FBIT09 EQU	0(146074)
		# FORCE BIT 09 (COMMON ERROR STROBE) ACTIVE
	-002- 34 FBIT09T TEXT	'COLLECT ERRORS IN STORE ERROR REGISTER'
0146064	-002- 35 FBIT09R EQU	0(146064)
	-002- 36 FBIT09RT TEXT	'COLLECT ERRORS IN SER W/ REFRESH ON'
0146076	-002- 37 FBRMB15 EQU	0(146076)
	-002- 38 FBRMB15T TEXT	'FANOUT BOARD REFRESH W/ ERROR COLLECT'
0046314	-002- 39 FCHKBT EQU	0(46314)
	-002- 40 FCHKBT T TEXT	'ACTIVATE MAIN SHIFTER CHECK BIT ACTIVE'
0046304	-002- 41 FCHKBTR EQU	0(46304)
	-002- 42 FCHKBTRT TEXT	'ACTIVATE SHIFTER CHECK BIT W/ REFRESH ENABLED'
0040574	-002- 43 FCHKOS EQU	0(40574)
	-002- 44 FCHKOST TEXT	'FORCE ZEROS TO MODULE SELECT XOR CHECK & WRITE PROTECT SELECT XOR CHECK CIRCUITS'
0041274	-002- 46 FCHK15 EQU	0(41274)
	-002- 47 FCHK15T TEXT	'FORCE ONES TO MODULE SELECT XOR CHECK & WRITE PROTECT SELECT XOR CHECK CIRCUITS'
0140574	-002- 49 FCKOS15 EQU	0(140574)

STORE WRITE PROTECT TEST

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CDGSPW

W770

0141274 -002- 01 FCKOS15T TEXT 'FORCE ZEROS TO CHECK CKTS W/ ERROR COLLECT'
 -002- 02 FCK1S15 EQU O(41274)
 0043074 -002- 03 FCK1S15T TEXT 'FORCE ONES TO CHECK CKTS W/ ERROR COLLECT'
 -002- 04 FCK1S15 EQU O(43074)
 0046156 -002- 05 FCK1S15T TEXT 'FORCE DISABLE OF IDLE FLOP'
 -002- 06 FLSMO EQU O(46156) # FORCE LOAD THE SHIFTER WITH ZERO
 (W/CLOCK)
 0046154 -002- 08 FLSHOT TEXT 'START ZERO INTO MAIN SHIFTER'
 -002- 09 FLSHMC EQU O(46154) # PUT ZERO ON INPUT OF SHIFTER (W/O
 CLOCK)
 0045434 -002- 11 FLSHMC TEXT 'PRESENT ZERO TO INPUT OF MAIN SHIFTER'
 -002- 12 FLOWRT EQU O(45434)
 0045430 -002- 13 FLOWRTT TEXT 'FORCE WRITING OF ALL-ONES DATA'
 -002- 14 FLOWRTC EQU O(45430)
 0044474 -002- 15 FLOWRTCT TEXT 'FORCE WRITING OF ONES W/ CLOCK RUNNING'
 -002- 16 FLOWRT EQU O(44474) # DISABLE TRANSMISSION OF TIMING SIGNALS
 TO FANOUT BOARDS
 0044470 -002- 18 FLOWRTCT TEXT 'INHIBIT TIMING SIGNALS TO FANOUT BOARDS'
 -002- 19 FLOWRTCT EQU O(44470)
 0041550 -002- 20 FLOWRTCT TEXT 'BLOCK TIMING TO FANOUT BOARDS(W/CLOCK)'
 -002- 21 FOWMT EQU O(41550)
 0041474 -002- 22 FOWMT TEXT 'FANOUT BOARD MAINTENANCE TEST'
 -002- 23 FRFSEL0 EQU O(41474) # FORCE REFRESH SELECT SIGNAL FROM FOB0
 0042334 -002- 24 FRFSEL0T TEXT 'CANCEL SELECT FROM FOB0 DURING REFRESH'
 -002- 25 FRFSEL1 EQU O(42334) # FORCE REFRESH SELECT SIGNAL FROM FOB1
 0042534 -002- 26 FRFSEL1T TEXT 'CANCEL SELECT FROM FOB1 DURING REFRESH'
 -002- 27 FRFSEL2 EQU O(42534) # FORCE REFRESH SELECT SIGNAL FROM FOB2
 0043234 -002- 28 FRFSEL2T TEXT 'CANCEL SELECT FROM FOB2 DURING REFRESH'
 -002- 29 FRFSEL3 EQU O(43234) # FORCE REFRESH SELECT SIGNAL FROM FOB3
 0043434 -002- 30 FRFSEL3T TEXT 'CANCEL SELECT FROM FOB3 DURING REFRESH'
 -002- 31 FRFSEL4 EQU O(43434) # FORCE REFRESH SELECT SIGNAL FROM FOB4
 004354 -002- 32 FRFSEL4T TEXT 'CANCEL SELECT FROM FOB4 DURING REFRESH'
 -002- 33 FRFSEL5 EQU O(44354) # FORCE REFRESH SELECT SIGNAL FROM FOB5
 0044554 -002- 34 FRFSEL5T TEXT 'CANCEL SELECT FROM FOB5 DURING REFRESH'
 -002- 35 FRFSEL6 EQU O(44554) # FORCE REFRESH SELECT SIGNAL FROM FOB6
 0045254 -002- 36 FRFSEL6T TEXT 'CANCEL SELECT FROM FOB6 DURING REFRESH'
 -002- 37 FRFSEL7 EQU O(45254) # FORCE REFRESH SELECT SIGNAL FROM FOB7
 0044334 -002- 38 FRFSEL7T TEXT 'CANCEL SELECT FROM FOB7 DURING REFRESH'
 -002- 39 FRREQA EQU O(44334) # SET REFRESH REQUEST FLOP (DFFREQ) ON
 TIMING BOARD (FA1071)
 0040674 -002- 41 FRREQAT TEXT 'SET REFRESH REQUEST ON TIMING BOARD (FA1071)'
 -002- 42 FRREQB EQU O(40674) # SET REFRESH REQUEST FLOP (RREQ) ON
 CHECK BOARD A (FA1062)
 0040664 -002- 44 FRREQBT TEXT 'SET REFRESH REQ COPY (.' CHECK BOARD A (FA1062)'
 -002- 45 FRREQBR EQU O(40664)
 0046074 -002- 46 FRREQBRT TEXT 'SET REFRESH REQUEST ON FA1062 W/ REFRESH ENABLED'
 -002- 47 FSELA EQU O(46074)
 0006074 -002- 48 FSELAT TEXT 'FORCE STORE SELECT (ISOLATE) SIGNAL ON FA1071'
 -002- 49 NSELA EQU O(6074)

STORE WRITE PROTECT TEST

PR-1C927-50

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CDGSMW

W77D

0004714	-002- 01 NSELAT TEXT	'RESET STORE SELECT(ISOLATE) SIGNAL ON FA1071'
	-002- 02 FSELB EQU	O(4714) # FORCE STORE SELECT (TDBSEL) FROM CHECK BOARD A (FA1062)
	-002- 04 FSELBT TEXT	'FORCE DUPLICATED STORE SELECT(SELB) ACTIVE'
0004710	-002- 05 FSELBC EQU	O(4710)
	-002- 06 FSELBT TEXT	'FORCE DUPLICATED STORE SELECT(SELB) W/ CLOCK'
0046516	-002- 07 FSTFBRM EQU	O(46516)
	-002- 08 FSTFBRMT TEXT	'FORCE CONTROLLER & FANOUT BOARDS TO REFRESH'
0042354	-002- 09 FSTNM EQU	O(42354) # FORCE MODE FLOP TO NORMAL STATE
	-002- 10 FSTNMT TEXT	'FORCE MODE FLOP TO NORMAL STATE'
0052354	-002- 11 FSTNMFR EQU	O(52354)
	-002- 12 FSTNMFR TEXT	'FORCE NORMAL MODE IN CONTROLLER & REFRESH TO FANOUT BOARDS'
0042344	-002- 13 FSTNMR EQU	O(42344)
	-002- 14 FSTNMT TEXT	'FORCE MODE TO NORMAL W/ REFRESH ENABLED'
0046514	-002- 15 FSTRM EQU	O(46514) # FORCE MODE FLOP TO REFRESH STATE
	-002- 16 FSTRMT TEXT	'FORCE MODE FLOP TO REFRESH STATE'
0046234	-002- 17 FTINWP EQU	O(46234)
	-002- 18 FTINWPT TEXT	'FORCE IN-WRITE-PROTECT INHIBIT'
0006220	-002- 19 IOGO EQU	O(6220)
	-002- 20 IOGOT TEXT	'ENABLE ON-LINE I/O ACCESS TO OFF-LINE STORE'
0125252	-002- 21 IOTSTA EQU	O(125252)
	-002- 22 IOTSTAT TEXT	'I/O TEST PATTERN #1'
0052525	-002- 23 IOTIST EQU	O(52525)
	-002- 24 IOTIST TEXT	'I/O TEST PATTERN #2'
0067214	-002- 25 ISOCHK EQU	O(67214) # CHECK ISOLATION FROM HIGHER STORES - PUT RESULTS OF TEST INTO STORE ERROR REGISTER (SER)
	-002- 28 ISOCHKT TEXT	'ISOLATE FROM FAR STORES & VERIFY VIA SER'
0027214	-002- 29 ISOCHKU EQU	O(27214)
	-002- 30 ISOCHKUT TEXT	'APPLY ONES TO STORE DATA BUS(W/O ISOLATE)'
0043454	-002- 31 KILL12 EQU	O(43454) # WIPE OUT SHIFTER BIT AT POSITION 12
	-002- 32 KILL12T TEXT	'CLEAR SHIFTER BIT IN POSITION 12'
0046071	-002- 33 MASCINT EQU	O(46071)
	-002- 34 MASCINTT TEXT	'INITIALIZE STORE CONTROLLER'
0006071	-002- 35 MSCINTS EQU	O(6071)
	-002- 36 MSCINTST TEXT	'INITIALIZE STORE CONTROLLER W/O FORCE SELECT'
0046076	-002- 37 MASCLK EQU	O(46076) # ACTIVATE STORE CONTROLLER CLOCK (CK) SIGNAL
	-002- 39 MASCLKT TEXT	'FAKE FIRST HALF OF STORE CLOCK CYCLE'
0046074	-002- 40 MASCLKN EQU	O(46074)
	-002- 41 MASCLKNT TEXT	'FAKE SECOND HALF OF STORE CLOCK CYCLE'
0047410	-002- 42 RDAD EQU	O(47410)
	-002- 43 RDADT TEXT	'GATE STORE ADDRESS BUS(SAO-16,PL) TO STORE DATA BUS(SDO-15,PL,PH) W/ CLOCK'
0047414	-002- 45 RDADNC EQU	O(47414)
	-002- 46 RDADNCT TEXT	'GATE STORE ADDRESS BITS TO STORE DATA BUS'
0006070	-002- 47 REFSTOP EQU	O(6070)
	-002- 48 REFSTOPT TEXT	'INHIBIT REFRESHING OF STORE'
0006060	-002- 49 REFSTRT EQU	O(6060)

STORE WRITE PROTECT TEST

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CDG5WP W77D

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-002- 01 REFSTRTT TEXT 'RESUME REGULAR REFRESHING OF STORE'
0046060 -002- 02 RFWISOL EQU 0(46060)
-002- 03 RFWISOLT TEXT 'RESUME REGULAR REFRESH W/ STORE ISOLATED'
0047214 -002- 04 RTNADHI EQU 0(47214) # RETURN UPPER ADDRESS (SA16-19) BITS &
# SELECTED CONTROL SIGNALS VIA I/O CHANNE

-002- 06 RTNADHIT TEXT 'LOAD SA17 & SAPH INTO SER'
0044714 -002- 07 SPAREA EQU 0(44714)
-002- 08 SPAREAT TEXT 'SPARE I/O ORDER'
0047114 -002- 09 SERREAD EQU 0(47114) # STORE ERROR REGISTER (SER) READ
-002- 10 SERREADT TEXT 'READ BACK STORE ERROR REGISTER(SER)'
0041634 -002- 11 STSBY EQU 0(41634)
-002- 12 STSBYT TEXT 'SET STORE BUSY(SBY) SIGNAL'
0041630 -002- 13 STSBYCL EQU 0(41630)
-002- 14 STSBYCLT TEXT 'SET STORE BUSY(SBY) W/ CLOCK'
0007114 -002- 15 USERRED EQU 0(7114)
-002- 16 USERREDT TEXT 'READ STORE ERROR REG (W/O ISOLATE)'
0046061 -002- 17 WPCLR EQU 0(46061)
-002- 18 WPCLRT TEXT 'STORE INITIALIZE, INCL. WRITE PROTECT'
0052354 -002- 19 D1ONOR EQU 0(52354) # FORCE 0-10 (D10TIM) SIGNAL & RESET
# REFRESH REQUEST FLOP

-002- 21 D1ONORT TEXT 'D-10 TIMING(D10TIM)THEN REFRESH REQUEST CLEAR'
0054334 -002- 22 D1OREF EQU 0(54334) # FORCE 0-10 (D10TIM) SIGNAL & SET
# REFRESH REQUEST FLOP

-002- 24 D1OREFT TEXT 'D-10 TIMING(D10TIM)THEN REFRESH REQUEST SET'
0056074 -002- 25 D1OTIM EQU 0(56074)
-002- 26 D1OTIMT TEXT 'FORCE 0-10 TIMING SIGNAL ACTIVE'

```

-002- 33 # STORE MAINTENANCE ORDER OPTIONS:

```

0010000 -002- 36 FAK010 EQU 0(10000) # FAKE 0-10 TIMING SIGNAL
-002- 37 # NOTE: NEXT OPTION BIT IS SHARED
0020000 -002- 38 FBUSRDN EQU 0(20000) # FORCE BUS READ INACTIVE TO BIT-SLICES
0020000 -002- 39 LOADCHK EQU 0(20000) # LOAD I/O ORDER CHECK RESULTS
0040000 -002- 40 ISOLATE EQU 0(40000) # ISOLATE THIS STORE FROM HIGHER STORES
0100000 -002- 41 FSBIT09 EQU 0(100000) # FORCE SHIFTER BIT 09 ACTIVE
0000001 -002- 42 INITBIT EQU 0(1) # INITIALIZE STORE CONTROLLER
-002- 43 # NOTE: NEXT OPTION BIT IS SHARED
0000002 -002- 44 FFBORM EQU 0(2) # FORCE FANOUT BOARDS TO REFRESH MODE
0000002 -002- 45 STEPCLK EQU 0(2) # HALF-CYCLE OF STORE CLOCK
0000004 -002- 46 HALTCLK EQU 0(4) # DISABLE STORE CONTROLLER CLOCK
0000010 -002- 47 STOPREF EQU 0(10) #DISABLE AUTONOMOUS REFRESH

```

STORE WRITE PROTECT TEST

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CDGSHW W77D

0177771 -002- 01 CLOCKON EQU 0(177771)
0020016 -002- 02 FGLNCFR EQU 0(20016)

MASK OUT CLOCK OFF OPTIONS
LOAD I/O ORDER CHECK RESULTS WITH CLOCK
STOPPED AND FANOUT BOARDS IN REFRESH
MODE

07 # SYMBOLS USED ONLY IN WRITE PROTECT TESTS:

0000004
0000005

09 BITPTR EQU 4
10 RESULT EQU 5

WRITE PROTECT BIT POINTER
WRITE PROTECT TEST RESULTS

STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 49

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSHW W77D

```

-001- 01 # *****
-001- 02 # *****
** *****
-001- 03 # **
** CU DIAGNOSTIC TEST NO. 49, MAIN_STORE_WRITE_PROTECT **
-001- 04 # **
** *****
-001- 05 # **
** *****
-001- 06 # *****
-001- 07 # *****

```

0025071

-001- 10 CSTWP1 CSECT

0025071 01 000000 000145 ----- CDGNM

-001- 14 VFD 1,0 2,0 2,0 2,0 3,1 6,NBGN

```

18 # SEGMENT 1
19 # THIS SEGMENT CHECKS TO MAKE SURE THAT ALL OF THE WRITE PROTECT BITS CAN
20 # BE INITIALIZED. THE STORE INITIALIZE MAINTENANCE OPTION (MASCINT) IS USED TO
21 # CLEAR ALL OF THE WRITE PROTECT BITS. THE WRITE PROTECT TEST SUBROUTINE
22 # (WPTST) CHECKS THAT ALL FOUR 16-BIT WRITE PROTECT REGISTERS ARE ALL-ZEROS.
23 # IF ANY WRITE PROTECT BIT IS NOT ZERO, THE WPTST ROUTINE WILL SET THE
24 # CORRESPONDING BIT IN THE MAINTENANCE CHANNEL BUFFER BEFORE RETURNING CONTROL.
25 # ANY SET BITS WILL THEN BE DETECTED BY THE COMPARE DIAGNOSTIC MACRO.

```

```

28 # SEGMENT 2
29 # THIS SEGMENT VERIFIES THAT EACH REGISTER OF 16 WRITE PROTECT BITS CAN BE
30 # WRITTEN AND READ INDEPENDENTLY. THIS REQUIRES THAT WRITES OR READS OF ONE OF
31 # THE FOUR WRITE PROTECT REGISTERS CAN BE ACCOMPLISHED WITHOUT AFFECTING OR
32 # BEING AFFECTED BY THE CONTENTS OF THE OTHER THREE REGISTERS. THIS IS DONE
33 # FUNCTIONALLY BY WRITING A BACKGROUND PATTERN OF ALL-ZEROS OR ALL-ONES INTO ALL
34 # OF THE WRITE PROTECT REGISTERS, AND THEN WRITING THE COMPLEMENT OF THAT
35 # PATTERN INTO ONE OF THE WRITE PROTECT REGISTERS. THE WRITE PROTECT TEST
36 # SUBROUTINE (WPTST) IS USED TO CHECK THE CONTENTS OF ALL FOUR OF THE REGISTERS
37 # FOR THE CORRECT PATTERNS. THIS IS REPEATED FOR EACH WRITE PROTECT REGISTER AND
38 # BOTH OF THE TEST PATTERNS. THE WPTST ROUTINE INDICATES ANY DISCREPANCIES BY
39 # SETTING THE CORRESPONDING BIT IN THE MAINTENANCE CHANNEL BUFFER. AGAIN,
40 # ANY SET BITS WILL THEN BE DETECTED BY THE COMPARE DIAGNOSTIC MACRO.

```

STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 49

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CD6SWP W77D

```

01 CSTMP1 ON 0(1),0(16) # 12706
-001- 02 NOTE ***** THE FIRST ADDRESS OVERRITTEN IS 000001 *****

0025072 05 WPMINIT PREPARE
-002- 06 # RTN.BLM
-002- 07 # TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
-002- 08 VFD 1,0 2,0 6,0 1,1 6,NRTNBLM

-002- 10 # SEND
-002- 11 # SEND 0(0000001) TO OFF-LINE MCHB.
-002- 12 # PARITY IS 0(2).
0025073 01 000002 04707 ----- CD6NM
0025074 01 000003 000040 000001
-002- 13 VFD 1,0 2,2 7,0(0111111) 6,N2SEND
-002- 14 ADDR 0(0000001),0(2)

-002- 16 # MICRO
-002- 17 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-002- 18 # TO FIELD = MSXT FROM FIELD = MCHBFX
0025076 01 000005 020005 ----- CD6NM
0025077 01 000006 106631 -----
-002- 19 VFD 1,0 2,1 7,0 6,NMICRO
-002- 20 VFD 8,MSXT 8,MCHBFX

-002- 22 # NO3 CODE
-002- 23 # PROCESS JACC CODED ROUTINE AT ADDRESS **2.
-002- 24 VFD 1,0 2,2 7,0 6,NN03CD
0025100 01 000007 040043 000000 CD6NM
0025101 01 000010 000000 025103 0025103
-002- 25 ADDR **2

-001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
-002- 28 LI R4,MXAS
-001- 29 STL R4,PAGSCR+24
0025103 01 000012 103501 000151 TTYTBL
0025105 01 000014 034500 043132 CTSB
-001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
-001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
-001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(IOADDR) IN PAGING BUFFER(PAGSCR)

0025107 01 000016 103240 -----
0025110 01 000017 004257 -----
-001- 34 IZ LOOPIND
-001- 35 SN LOOPIND,1 # ASSURE THAT LOOPIND IS ZERO BEFORE
# PROCEEDING WITH TEST

0025111 01 000020 072652 ----- CD6NM
0025112 01 000021 037020 012757 CD6S10
0025114 01 000023 172652 ----- CD6NM
0025115 01 000024 137020 012667 CD6S10
0025117 01 000026 046071 -----
-001- 37 HN LOOPIND,LOOPIND
-002- 38 BSA CONTPREP
-001- 39 HN LOOPIND,LOOPIND
-003- 40 BSA MASCION
-002- 41 DATA MASCINT # INITIALIZE STORE CONTROLLER

0025120 01 000027 171400 -----
0025121 01 000030 031000 025125 0025125
0025123 01 000032 037000 011162 CD6NM
-002- 43 GA
-002- 44 LAL RD,**4,RAD
-002- 45 BL INTRPN03

```

STORE WRITE PROTECT TEST

PR-1C927-50

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F04

TEST 49

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W770

0025125

01
-001- 02

EOW
NOTE

12706

***** THE LAST ADDRESS OVERWRITTEN IS 000033 *****

STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 49 SEGMENT 1

0106:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 49 SEGMENT 1
-001- 04 # *
-001- 05 # *****

```

```

0025125 01 000034 000100 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,0(1) 6,NTESTSEG

```

```

11 # THIS SEGMENT CHECKS TO MAKE SURE THAT ALL OF THE WRITE PROTECT BITS CAN
12 # BE INITIALIZED. THE STORE INITIALIZE MAINTENANCE OPTION (MASCINT) IS USED TO
13 # CLEAR ALL OF THE WRITE PROTECT BITS. THE WRITE PROTECT TEST SUBROUTINE
14 # (WPTST) CHECKS THAT ALL FOUR 16-BIT WRITE PROTECT REGISTERS ARE ALL-ZEROS.
15 # IF ANY WRITE PROTECT BIT IS NOT ZERO, THE WPTST ROUTINE WILL SET THE
16 # CORRESPONDING BIT IN THE MAINTENANCE CHANNEL BUFFER BEFORE RETURNING CONTROL.
17 # ANY SET BITS WILL THEN BE DETECTED BY THE COMPARE DIAGNOSTIC MACRO.

```

```

-001- 22 # NO3 CODE
-001- 23 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WPRCKD.
-001- 24 VFD 1,0 2,2 7,0 6,NN03CD
0025126 01 000035 040043 000000 CDGNM -001- 25 ADDR WPRCKD
0025127 01 000036 000000 025131 0025131

```

27 # CHECK THAT WRITE PROTECT BITS CAN BE CLEARED

```

0025131 29 WPRCKD
0025131 30 SIOM MASCINT # CLEAR WRITE PROTECT BITS
0025131 01 000040 137020 012667 CDGSI0 -002- 31 BSA MASIOH
0025133 01 000042 046071 ----- -001- 32 DATA MASCINT # INITIALIZE STORE CONTROLLER
0025134 01 000043 103200 ----- 33 ZR R8 # SET UP ALL-ZEROS TEST PATTERN
0025135 01 000044 031700 043140 CTSD 34 LAL R12,BASADDR,RA1
0025137 01 000046 040721 ----- 35 L R13,1(RA1) # ADDRESS FIRST MEMORY MOD
0025140 01 000047 003363 ----- 36 LN R15,3 # CHECK ALL FOUR (4) WRITE PROTECT REGS
0025141 37 CALL WPTST
0025141 01 000050 037020 025002 0025002 -001- 38 BSA WPTST
0025143 40 RTN_TBL +*+
0025143 01 000052 171400 ----- -001- 41 GA
0025144 01 000053 031000 025150 0025150 -001- 42 LAL R0,+*+,RAD
0025146 01 000055 037000 011162 CDGNM -001- 43 BL INTRPN03

```

```

-001- 45 # COMPARE
-001- 46 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(00000000).
-001- 47 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025150 01 000057 050014 ----- CDGNM -001- 48 VFD 1,ALINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0025151 01 000060 000000 000000 -001- 49 ADDR 0(00000000)

```

STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 49 SEGMENT 1

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W770

```

-001- 02 # FAILBIT
-001- 03 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS WPSLCXX
-001- 04 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0025153 01 000062 020220 ----- CDG6M
0025154 01 000063 000002 -----
-001- 05 # VFD 1,0 2,1 5,0 2,2 6,NFLBITS
-001- 06 # VFD 16,WPSLC

```

08 # A WRITE PROTECT BIT IS STUCK-AT-ONE

```

-001- 11 # COMPARE
-001- 12 # COMPARE ON-LINE MCHB BIT PL TO 0.
-001- 13 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025155 01 000064 022414 ----- CDG6M
0025156 01 000065 000000 -----
-001- 14 # VFD 1,LINDEX 2,1 1,0 1,SUCCESS 5,PL 6,NCOMPARE
-001- 15 # VFD 15,0 1,0

```

```

-001- 17 # FAILTST
-001- 18 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 19 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025157 01 000066 020217 ----- CDG6M
0025160 01 000067 000022 -----
-001- 20 # VFD 1,0 2,1 5,0 2,2 6,NFAILTST
-001- 21 # VFD 16,WPSLCPL

```

23 # A WRITE PROTECT REGISTER PARITY LOW BIT CANNOT BE INITIALIZED TO ZERO

```

-001- 26 # COMPARE
-001- 27 # COMPARE ON-LINE MCHB BIT PH TO 0.
-001- 28 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025161 01 000070 022514 ----- CDG6M
0025162 01 000071 000000 -----
-001- 29 # VFD 1,LINDEX 2,1 1,0 1,SUCCESS 5,PH 6,NCOMPARE
-001- 30 # VFD 15,0 1,0

```

```

-001- 32 # FAILTST
-001- 33 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 34 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025163 01 000072 020217 ----- CDG6M
0025164 01 000073 000023 -----
-001- 35 # VFD 1,0 2,1 5,0 2,2 6,NFAILTST
-001- 36 # VFD 16,WPSLCPL

```

38 # A WRITE PROTECT REGISTER PARITY HIGH BIT CANNOT BE INITIALIZED TO ZERO

STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 49 SEGMENT 2

0106:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 49 SEGMENT 2
-001- 04 # *
-001- 05 # *****

```

0025165 01 000074 000200 ----- CDGMH -001- 08 VFD 1,0 2,0 2,0 5,0(2) 6,NTESTSEG

```

11 # THIS SEGMENT VERIFIES THAT EACH REGISTER OF 16 WRITE PROTECT BITS CAN BE
12 # WRITTEN AND READ INDEPENDENTLY. THIS REQUIRES THAT WRITES OR READS OF ONE OF
13 # THE FOUR WRITE PROTECT REGISTERS CAN BE ACCOMPLISHED WITHOUT AFFECTING OR
14 # BEING AFFECTED BY THE CONTENTS OF THE OTHER THREE REGISTERS. THIS IS DONE
15 # FUNCTIONALLY BY WRITING A BACKGROUND PATTERN OF ALL-ZEROS OR ALL-ONES INTO ALL
16 # OF THE WRITE PROTECT REGISTERS, AND THEN WRITING THE COMPLEMENT OF THAT
17 # PATTERN INTO ONE OF THE WRITE PROTECT REGISTERS. THE WRITE PROTECT TEST
18 # SUBROUTINE (WPTST) IS USED TO CHECK THE CONTENTS OF ALL FOUR OF THE REGISTERS
19 # FOR THE CORRECT PATTERNS. THIS IS REPEATED FOR EACH WRITE PROTECT REGISTER AND
20 # BOTH OF THE TEST PATTERNS. THE WPTST ROUTINE INDICATES ANY DISCREPANCIES BY
21 # SETTING THE CORRESPONDING BIT IN THE MAINTENANCE CHANNEL BUFFER. AGAIN,
22 # ANY SET BITS WILL THEN BE DETECTED BY THE COMPARE DIAGNOSTIC MACRO.

```

```

-001- 25 # NO3 CODE
-001- 26 # PROCESS JACC CODED ROUTINE AT ADDRESS WPRWCKD.
0025166 01 000075 040043 000000 CDGMH
0025167 01 000076 000000 025171 0025171 -001- 28 VFD 1,0 2,2 7,0 6,NNO3CD
ADDR WPRWCKD

```

30 # CAN ONES BE WRITTEN/READ THRU ONE WRITE PROTECT REG W/O AFFECTING THE OTHERS?

```

0025171 32 WPRWCKD
0025171 01 000100 131700 043140 CTSO 33 LAL R12,BASADDR,RA1
0025173 01 000102 040721 ----- 34 LI R13,(RA1) # ADDRESS FIRST WRITE PROTECT REG (MOD 0)
0025174 01 000103 003103 ----- 35 LN R4,5 # REPEAT TEST FOR EACH WRITE PROTECT REG
0025175 36 WPRWLPD
0025175 01 000104 130620 043133 CTSO 37 LL R9,IOADDR # RESTORE SUBCHANNEL ADDRESS
0025177 38 SIOH MASCINT # CLEAR WRITE PROTECT BITS
0025177 01 000106 037020 012667 CDGSIO -002- 39 BSA MASIOM
0025201 01 000110 046071 ----- -001- 40 DATA MASCINT # INITIALIZE STORE CONTROLLER
0025202 41 MTCWRIT RAD,ONES # WRITE ONES IN WRITE PROTECT REG
0025202 01 000111 103561 106203 -001- 42 LI R7,HTCHR
0025204 01 000113 003741 177777 -001- 43 LI R14,ONES # SET UP ONES TO BE WRITTEN (SD0-15)
0025206 01 000115 003360 ----- -001- 44 ZR R15 # CLEAR HIGH BITS (SD16-23)
0025207 01 000116 006054 ----- -001- 45 LR R2,R12
0025210 01 000117 006075 ----- -001- 46 LR R3,R13
0025211 01 000120 003541 000000 -001- 47 LI R6,0 # LOAD SPECIAL PARITY
0025213 01 000122 037020 013027 CDGSBS -002- 48 BSA MEMOP
0025215 49 SIOH CLSRER # CLEAR POSSIBLE NORMAL SELECT ERROR

```

STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 49 SEGMENT 2

0106:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDG5WP W77D

```

0025215 01 000124 137020 012667 CDG510 -002- 01 BSA MASIOM
0025217 01 000126 043510 103601 -001- 02 DATA CLSER
0025220 01 000127 103401 177777 03 LI RS,ONES # CLEAR STORE ERROR REGISTER
0025222 01 000131 003360 ----- 04 ZR R15 # SET UP ALL-ONES TEST PATTERN
0025223 05 CALL WPTST # ONLY CHECK REG THAT WAS WRITTEN
0025223 01 000132 037020 025002 0025002 -001- 06 BSA WPTST
0025225 01 000134 112403 ----- 07 UNPK MCHB
0025226 01 000135 014063 ----- 08 R3 # ANY MISMATCH BITS SET?
0025227 01 000136 055006 ----- 09 BNC DIRFAL
0025230 01 000137 057403 ----- 10 TSRPL MCHB # PARITY LOW ERROR?
0025231 01 000140 054004 ----- 11 BC DIRFAL
0025232 01 000141 057423 ----- 12 TSRPH MCHB # PARITY HIGH ERROR?
0025233 01 000142 054002 ----- 13 BC DIRFAL
0025234 01 000143 053030 ----- 14 B UPWPADO # SKIP OVER FAILURE RESOLUTION ROUTINE

0025235 17 DIRFAL
0025235 18 RTN_TBL **4
0025235 01 000144 171400 ----- -001- 19 GA
0025236 01 000145 031000 025242 0025242 -001- 20 LAL RO,**4,RAO
0025240 01 000147 037000 011162 CDG5NM -001- 21 BL INTRPNOS

-001- 23 # COMPARE NOT
-001- 24 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177777).
-001- 25 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0025242 01 000151 054014 ----- CDG5NM VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPAR
0025243 01 000152 000000 177777 -001- 27 ADDR 0(0177777)

-001- 29 # FAULTST
-001- 30 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLFL.
-001- 31 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025245 01 000154 020217 ----- CDG5NM VFD 1,0 2,1 5,0 2,2 6,NFAULTST
0025246 01 000155 000024 ----- -001- 32 VFD 16,WPSLFL
-001- 33

35 # NONE OF THE WRITE PROTECT BITS WERE WRITTEN/READ CORRECTLY

-001- 38 # COMPARE
-001- 39 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 40 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025247 01 000156 050014 ----- CDG5NM VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPAR
0025250 01 000157 000000 000000 -001- 42 ADDR 0(0000000)

-001- 44 # FAULTBIT
-001- 45 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS WPSLCLX
-001- 46 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0025252 01 000161 020220 ----- CDG5NM VFD 1,0 2,1 5,0 2,2 6,NFLBITS
0025253 01 000162 000002 ----- -001- 48 VFD 16,WPSLCL

```

STORE WRITE PROTECT TEST

PR-1C927-50

TEST 49 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

01 # ONE OF THE WRITE PROTECT BITS WAS NOT WRITTEN/READ CORRECTLY

```

-001- 03 # COMPARE
-001- 04 # COMPARE ON-LINE MCHB BIT PL TO 0.
-001- 05 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025254 01 000163 022414 ----- CDGNM
0025255 01 000164 000000 -----
-001- 06 VFD 1,LPINDX 2,1 1,0 1,SUCCES 5,PL 6,NCOMPARE
-001- 07 VFD 15,0 1,0

-001- 09 # FAILTST
-001- 10 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 11 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025256 01 000165 020217 ----- CDGNM
0025257 01 000166 000022 -----
-001- 12 VFD 1,0 2,1 5,0 2,2 6,NFAILTST
-001- 13 VFD 16,WPSLCPL

```

15 # A WRITE PROTECT REGISTER PARITY LOW BIT WAS NOT WRITTEN/READ CORRECTLY

```

-001- 18 # COMPARE
-001- 19 # COMPARE ON-LINE MCHB BIT PH TO 0.
-001- 20 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025260 01 000167 022514 ----- CDGNM
0025261 01 000170 000000 -----
-001- 21 VFD 1,LPINDX 2,1 1,0 1,SUCCES 5,PH 6,NCOMPARE
-001- 22 VFD 15,0 1,0

-001- 24 # FAILTST
-001- 25 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 26 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025262 01 000171 020217 ----- CDGNM
0025263 01 000172 000023 -----
-001- 27 VFD 1,0 2,1 5,0 2,2 6,NFAILTST
-001- 28 VFD 16,WPSLCPL

```

30 # A WRITE PROTECT REGISTER PARITY HIGH BIT WAS NOT WRITTEN/READ CORRECTLY

```

0025264
0025264 01 000173 106014 -----
0025265 01 000174 030420 012754 CDGSI0
0025267 01 000176 001721 -----
0025270 01 000177 001721 -----
0025271 01 000200 055010 ----- 0025301
0025272 01 000201 004701 -----
0025273 01 000202 030420 012756 CDGSI0
0025275 01 000204 014001 -----
0025276 01 000205 015421 -----
0025277 01 000206 014301 -----
0025300 01 000207 014700 -----

35 UPWPADO
36 LR R0,R12 # SAVE CURRENT STORE SELECT BITS
37 LL R1,MODSIZE
38 AR R15,R1
39 AR R13,R1 # POINT TO NEXT WRITE PROTECT REGISTER
40 BNC WPORCKO # CARRY PAST LOW ADDRESS BITS?
41 AN R12,1 # IF SO, INCREMENT HI ADDRESS BITS
42 LL R1,STSELM5K # ORIGINAL STORE SELECT BITS
43 NR R0,R1
44 COM R1
45 NR R12,R1 # NEW MODULE SELECT BITS
46 OR R12,R0 # OLD STORE SELECT W/ NEW MOD SELECT BITS

```

STORE WRITE PROTECT TEST

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TEST 49 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

01 # WERE ANY OTHER WRITE PROTECT REGISTERS AFFECTED?

```

0025301          03 WPORCKD
0025301 01 000210 103200 ----- 04 ZR R8 # SET UP ALL-ZEROS TEST PATTERN
0025302 01 000211 003362 ----- 05 LN R15,2 # CHECK THREE REMAINING WRITE PROTECT
                                           REGS
0025303          07 CALL WPTST
0025303 01 000212 037020 025002 0025002 -001- 08 BSA WPTST
0025305 01 000214 112403 ----- 09 UNPK MCHB
0025306 01 000215 014063 ----- 10 TZ R3 # ANY MISMATCH BITS SET?
0025307 01 000216 055014 ----- 11 BNC INDIRF
0025310 01 000217 057403 ----- 12 TSRPL MCHB # PARITY LOW ERROR?
0025311 01 000220 054012 ----- 13 BC INDIRF
0025312 01 000221 057423 ----- 14 TSRPH MCHB # PARITY HIGH ERROR?
0025313 01 000222 054010 ----- 15 BC INDIRF

                                           17 CSTMP1 OW O(223) # 12988
-001- 18 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000223 *****

                                           21 CPATCH1 BGWP O(624) # 12988
0025314 01 000223 037000 113410 0000626 -001- 22 BL XXX352
-001- 23 NOTE CPATCH1 'CSECT'
-001- 24 NOTE ***** PATCH AREA BEGINS AT 000626 *****

0113410          -001- 27 XXX352 PATCHAREA
0113410          28 CALL WAIT # TAKE A REAL TIME BREAK.
0113410 06 000626 173025 ----- -001- 29 BSAI WXAIT # SUBROUTINE WAIT IS IN PROGRAM CBLM
0113411 06 000627 136100 025175 0000104 30 BX R4, WPRWLPD
0113413          31 ENDP # 12988
0113413 06 000631 037000 025316 0000225 -001- 32 BL XXX355
-001- 33 NOTE ***** LAST PATCH ADDRESS USED IS 000632 *****
-001- 34 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

0025316          -001- 37 XXX355 OMCONTINUE
0025316          38 RTN_TBL WPKCKOXT # SKIP OVER FAILURE RESOLUTION ROUTINE
0025316 01 000225 171400 ----- -001- 39 GA
0025317 01 000226 031000 025352 0025352 -001- 40 LAL RO, WPKCKOXT, RAD
0025321 01 000230 037000 011162 CDGWH -001- 41 BL INTRFWO3

0025323          43 EOW # 12988
-001- 44 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000231 *****

```

STORE WRITE PROTECT TEST

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TEST 49 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSMW

W77D

```

0025323          03 INDIRF
0025323          04 RTN_TBL **4
0025323 01 000232 171400 ----- -001- 05 GA
0025324 01 000233 031000 025330 0025330 -001- 06 LAL RD,**4,RAO
0025326 01 000235 037000 011162 CDGNM -001- 07 BL INTRPN03

-001- 09 # COMPARE NOT
-001- 10 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177777).
-001- 11 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0025330 01 000237 054014 ----- CDGNM -001- 12 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0025331 01 000240 000000 177777 -001- 13 ADDR 0(0177777)

-001- 15 # FAILTST
-001- 16 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPIDFL.
-001- 17 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025333 01 000242 020217 ----- CDGNM -001- 18 VFD 1,0 2,1 5,0 2,2 6,NFAILTST
0025334 01 000243 000025 ----- -001- 19 VFD 16,WPIDFL

31 # AN ENTIRE WRITE PROTECT REGISTER WAS AFFECTED BY WRITING/READING ANOTHER REG

-001- 24 # COMPARE
-001- 25 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 26 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025335 01 000244 050014 ----- CDGNM -001- 27 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0025336 01 000245 000000 000000 -001- 28 ADDR 0(0000000)

-001- 30 # FAILBIT
-001- 31 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS WPSLCXX
-001- 32 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0025340 01 000247 020220 ----- CDGNM -001- 33 VFD 1,0 2,1 5,0 2,2 6,NFLBITS
0025341 01 000250 000002 ----- -001- 34 VFD 16,WPSLCX

36 # A BIT IN A WRITE PROTECT REGISTER WAS AFFECTED BY WRITING/READING ANOTHER REG

-001- 39 # COMPARE
-001- 40 # COMPARE ON-LINE MCHB BIT PL TO 0.
-001- 41 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025342 01 000251 022414 ----- CDGNM -001- 42 VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,PL 6,NCOMPARE
0025343 01 000252 000000 ----- -001- 43 VFD 15,0 1,0

-001- 45 # FAILTST
-001- 46 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 47 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025344 01 000253 020217 ----- CDGNM -001- 48 VFD 1,0 2,1 5,0 2,2 6,NFAILTST
0025345 01 000254 000022 ----- -001- 49 VFD 16,WPSLCPL

```

STORE WRITE PROTECT TEST

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TEST 49 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

C0G5WP

W770

02 # A PARITY LOW BIT IN A WRITE PROTECT REGISTER WAS WRITTEN/READ WITH ANOTHER REG

```

-001- 05 # COMPARE
-001- 06 # COMPARE ON-LINE MCH9 BIT PH TO 0.
-001- 07 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025346 01 000255 022514 ----- C0G5NM
0025347 01 000256 000000 -----
-001- 08 # VFD 1,1,PIND0 2,1 1,0 1,SUCCESS 5,PH 6,NCOMPARE
-001- 09 # VFD 15,0 1,0

-001- 11 # FAILTST
-001- 12 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPH.
-001- 13 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025350 01 000257 020217 ----- C0G5NM
0025351 01 000260 000023 -----
-001- 14 # VFD 1,0 2,1 5,0 2,2 6,NFAILTST
-001- 15 # VFD 16,WPSLCPH

```

17 # PARITY HIGH BIT IN A WRITE PROTECT REGISTER WAS WRITTEN/READ WITH ANOTHER REG

```

0025352
20 WPCCKXT
-001- 21 # NO3 CODE
-001- 22 # PROCESS JACC CODED ROUTINE AT ADDRESS WPRWCK1.
0025352 01 000261 040043 000000 C0G5NM
0025353 01 000262 000000 025355 0025355
-001- 23 # VFD 1,0 2,2 7,0 6,NNO3CD
-001- 24 # ADDR WPRWCK1

```

28 # CAN ZEROS BE WRITTEN/READ FROM ONE WRITE PROTECT REG W/O AFFECTING THE OTHERS?

```

0025355
0025355 01 000264 131700 043140 CTSD
0025357 01 000266 040721 -----
0025360 01 000267 003051 000003

30 WPRWCK1
31 # LAL R12,BASADDR,RA1
32 # L R13,1(RA1)
33 # LI R4,3 # WRITE ONES IN ALL FOUR WRITE PROTECT REGS

0025362
0025362
0025362 01 000271 103561 104203
0025364 01 000273 003741 177777
0025366 01 000275 003360 -----
0025367 01 000276 006054 -----
0025370 01 000277 006075 -----
0025371 01 000300 003541 000000
0025373 01 000302 037020 013027 C0G5BS
0025375

35 WPNOLP1
36 # HTCHWIT RAD,ONES
37 # LI R7,HTCHWR
-001- 38 # LI R14,ONES
-001- 39 # ZR R15 # SET UP ONES TO BE WRITTEN (SD0-15)
-001- 40 # LR R2,R12 # CLEAR HIGH BITS (SD16-23)
-001- 41 # LR R3,R13
-001- 42 # LI R6,0 # LOAD SPECIAL PARITY
-002- 43 # BSA MEMOP # CLEAR POSSIBLE NORMAL SELECT ERROR
44 # SIOM CLRSER
-002- 45 # BSA MASIOM # CLEAR STORE ERROR REGISTER
-001- 46 # DATA CLRSER # SAVE CURRENT STORE SELECT BITS
47 # LR R0,R12
48 # LL R1,MODSIZE
49 # AR R15,R1

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET C0G5WP ISSUE 05 PAGE 33

TEST 49 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSPW W77D

```

0025404 01 000313 001721 ----- 01 AR R13,R1 # POINT TO NEXT WRITE PROTECT REGISTER
0025405 01 000314 053010 ----- 02 BNC WPNDBX1 # CARRY PAST LOW ADDRESS BITS?
0025406 01 000315 004701 ----- 03 AN R12,1 # IF SO, INCREMENT HI ADDRESS BITS
0025407 01 000316 030420 012756 CDG610 04 LL R1,STSELMSK
0025411 01 000320 014001 ----- 05 NR R0,R1 # ORIGINAL STORE SELECT BITS
0025412 01 000321 015421 ----- 06 COM R1
0025413 01 000322 014301 ----- 07 NR R12,R1 # NEW MODULE SELECT BITS
0025414 01 000323 014700 ----- 08 R12,R0 # OLD STORE SELECT W/ NEW MOD SELECT BITS
                                09 CSTWP1 OW # 12944)
                                -001- 10 NOTE ***** THE FIRST ADDRESS OVERRITTEN IS 000324 *****

0025415 13 WPNDBX1
0025415 01 000324 137000 113415 0000633 -001- 14 CPATCH1 BGNP 0(633) # 12988
                                -001- 15 BL XXX377
                                -001- 16 NOTE CPATCH1 'CSECT'
                                -001- 17 NOTE ***** PATCH AREA BEGINS AT 000633 *****

0113415 -001- 20 XXX377 PATCHAREA
0113415 06 000633 136100 025362 0000271 21 BX R4,WPNLPL1

23 # ALL WRITE PROTECT BITS SHOULD BE SET -- NOW WRITE ALL ZEROS IN WRITE
24 # PROTECT BITS POINTED TO BY FIRST ADDRESS REG PAIR(RA0), CHECK WHETHER THEY
25 # WERE WRITTEN CORRECTLY AND CHECK WHETHER ANY OTHER BITS WERE AFFECTED

0113417 -001- 27 CALL WAIT # TAKE A REAL TIME BREAK.
0113417 06 000635 073025 ----- 28 BSAI WXAII # SUBROUTINE WAIT IS IN PROGRAM CBLM
0113420 29 ENDP # 12988
0113420 06 000636 137000 025417 0000326 -001- 30 BL XXX380
                                -001- 31 NOTE ***** LAST PATCH ADDRESS USED IS 000637 *****
                                -001- 32 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

0025417 -001- 35 XXX380 OWCONTINUE
0025417 01 000326 131700 043140 CTSD 36 LAL R12,BASADDR,RA1
0025421 37 EOW # 12988
                                -001- 38 NOTE ***** THE LAST ADDRESS OVERRITTEN IS 000327 *****

0025421 01 000330 040721 ----- 41 L R13,1(RA1) # RE-ESTABLISH BASE ADDRESS
0025422 01 000331 003103 ----- 42 LN R4,5 # TEST ALL FOUR WRITE PROTECT REGISTERS

0025423 44 WPRHLP1
0025423 45 MTCWRIT RAD,ZEROS,PRHOLD
0025423 01 000332 103561 106203 -001- 46 LI R7,MTCWR
0025425 01 000334 003741 000000 -001- 47 LI R14,ZEROS # SET UP ZEROS TO BE WRITTEN (SD0-15)
0025427 01 000336 003360 ----- -001- 48 ZR R15 # CLEAR HIGH BITS (SD16-23)
0025430 01 000337 004054 ----- -001- 49 LR R2,R12

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSPW ISSUE 05 PAGE 34

TEST 49 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP W77D

```

0025431 01 000340 006075 ----- -001--01 LR R3,R13
0025432 01 000341 003541 000020 -001- 02 LI R6,PRHOLD # LOAD SPECIAL PARITY
0025434 01 000343 037020 013027 CDGWSB -002- 03 BSA MEMOP
0025436 ----- -002- 04 SIOM CLRSER # CLEAR POSSIBLE NORMAL SELECT ERROR
0025436 01 000345 137020 012667 CDGSI0 -002- 05 BSA MASIM0
0025440 01 000347 043310 ----- -001- 06 DATA CLRSER # CLEAR STORE ERROR REGISTER
0025441 01 000350 103200 ----- 07 ZR R8 # ALL-ZEROS TEST PATTERN
0025442 01 000351 003360 ----- 08 ZR R15 # JUST CHECK SECOND WRITE PROTECT REG
0025443 ----- 09 CALL WPTST
0025443 01 000352 037020 025002 0025002 -001- 10 BSA WPTST

0025445 01 000354 112403 ----- 12 UNPK MCHB
0025446 01 000355 014063 ----- 13 TZ R3 # ANY MISMATCH BITS SET?
0025447 01 000356 055006 ----- 0025455 14 BNC DRFAIL
0025450 01 000357 057403 ----- 15 TSRPL MCHB # PARITY LOW ERROR?
0025451 01 000360 054004 ----- 0025455 16 BC DRFAIL
0025452 01 000361 057423 ----- 17 TSRPH MCHB # PARITY HIGH ERROR?
0025453 01 000362 054002 ----- 0025455 18 BC DRFAIL
0025454 01 000363 053030 ----- 0025504 19 B UPWPA1 # SKIP OVER FAILURE RESOLUTION ROUTINE

0025455 ----- 22 DRFAIL
0025455 ----- 23 RTN_TBL **4
0025455 01 000364 171400 ----- -001- 24 GA
0025456 01 000365 031000 025462 0025462 -001- 25 LAL RD,**4,RAD
0025460 01 000367 037000 011162 CDGNM -001- 26 BL INTRPN03

-001- 28 # COMPARE NOT
-001- 29 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177777).
-001- 30 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0025462 01 000371 054014 ----- CDGNM -001- 31 VFD 1,LINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0025463 01 000372 000000 177777 -001- 32 ADDR 0(0177777)

-001- 34 # FAILTST
-001- 35 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPDRL.
-001- 36 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025465 01 000374 020217 ----- CDGNM -001- 37 VFD 1,0 2,1 5,0 2,2 6,FAILTST
0025466 01 000375 000024 ----- -001- 38 VFD 16,WPDRL

40 # NONE OF THE WRITE PROTECT BITS WERE WRITTEN/READ CORRECTLY

-001- 43 # COMPARE
-001- 44 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 45 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025467 01 000376 050014 ----- CDGNM -001- 46 VFD 1,LINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0025470 01 000377 000000 000000 -001- 47 ADDR 0(0000000)

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 35

TEST 49 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

```

-001- 01 # FAILBIT
-001- 02 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS WPSLCXX
-001- 03 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0025472 01 000401 020220 ----- CDGNN
0025473 01 000402 000002 -----
-001- 04 # VFD 1,0 2,1 5,0 2,2 6,NFLBITS
-001- 05 # VFD 16,WPSLC

```

07 # ONE OF THE WRITE PROTECT BITS WAS NOT WRITTEN/READ CORRECTLY

```

-001- 10 # COMPARE
-001- 11 # COMPARE ON-LINE MCHB BIT PL TO 0.
-001- 12 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025474 01 000403 022414 ----- CDGNN
0025475 01 000404 000000 -----
-001- 13 # VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,PL 6,NCOMPARE
-001- 14 # VFD 15,0 1,0

```

```

-001- 16 # FAILTST
-001- 17 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 18 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025476 01 000405 020217 ----- CDGNN
0025477 01 000406 000022 -----
-001- 19 # VFD 1,0 2,1 5,0 2,2 6,NFAILTST
-001- 20 # VFD 16,WPSLCPL

```

22 # A WRITE PROTECT REGISTER PARITY LOW BIT WAS NOT WRITTEN/READ CORRECTLY

```

-001- 25 # COMPARE
-001- 26 # COMPARE ON-LINE MCHB BIT PH TO 0.
-001- 27 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025500 01 000407 022514 ----- CDGNN
0025501 01 000410 000000 -----
-001- 28 # VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,PH 6,NCOMPARE
-001- 29 # VFD 15,0 1,0

```

```

-001- 31 # FAILTST
-001- 32 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 33 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025502 01 000411 020217 ----- CDGNN
0025503 01 000412 000023 -----
-001- 34 # VFD 1,0 2,1 5,0 2,2 6,NFAILTST
-001- 35 # VFD 16,WPSLCPL

```

37 # A WRITE PROTECT REGISTER PARITY HIGH BIT WAS NOT WRITTEN/READ CORRECTLY

```

0025504 42 UPWPA01
0025504 01 000413 106014 ----- 43 LR R0,R12 # SAVE CURRENT STORE SELECT BITS
0025505 01 000414 030420 012754 CDGSI0 44 LL R1,MODSIZE
0025507 01 000416 001721 ----- 45 AR R13,R1
0025510 01 000417 001721 ----- 46 AR R13,R1 # POINT TO NEXT WRITE PROTECT REGISTER
0025511 01 000420 055010 ----- 47 BNC WPOCK1 # CARRY PAST LOW ADDRESS BITS?
0025512 01 000421 004701 ----- 48 AN R12,1 # IF SO, INCREMENT HI ADDRESS BITS
0025513 01 000422 030420 012756 CDGSI0 49 LL R1,STSELMSK

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 36

TEST 49 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSPW

W77D

0025515 01 000424 014001 -----	01	NR	R0,R1	# ORIGINAL STORE SELECT BITS
0025516 01 000425 015421 -----	02	COM	R1	
0025517 01 000426 014301 -----	03	NR	R12,R1	# NEW MODULE SELECT BITS
0025520 01 000427 014700 -----	04	OR	R12,R0	# OLD STORE SELECT W/ NEW MOD SELECT BITS

06 # WERE ANY OTHER WRITE PROTECT REGISTERS AFFECTED?

0025521			08 WPORCK1	
0025521 01 000430 103601 177777	09	LI	R8,ONES	# SET UP ALL-ONES TEST PATTERN
0025523 01 000432 003362 -----	10	LN	R15,2	# CHECK OTHER THREE WRITE PROTECT REGS
0025524			11 CALL WPTST	
0025524 01 000433 037020 025002 0025002 -001-	12	BSA	WPTST	
0025526 01 000435 112403 -----	14	UNPK	MCHB	
0025527 01 000436 014063 -----	15	TZ	R3	
0025530 01 000437 055035 ----- 0025565	16	BNC	INDRFAIL	# ANY MISMATCH BITS SET?
0025531 01 000440 057403 -----	17	TSRPL	MCHB	# PARITY LOW ERROR?
0025532 01 000441 054033 ----- 0025565	18	BC	INDRFAIL	
0025533 01 000442 057423 -----	19	TSRPH	MCHB	# PARITY HIGH ERROR?
0025534 01 000443 054031 ----- 0025565	20	BC	INDRFAIL	

22 # RESTORE ONES TO WRITE PROTECT REG UNDER TEST

0025535 01 000444 031700 043140 CTSO	24	LAL	R12,BASADDR,RA1	
0025537 01 000446 040721 -----	25	L	R13,1(RA1)	# RE-ESTABLISH BASE ADDRESS
0025540			26 MTCWRIT RAO,ONES	
0025540 01 000447 003561 106203 -001-	27	LI	R7,MTWNR	
0025542 01 000451 003741 177777 -001-	28	LI	R14,ONES	# SET UP ONES TO BE WRITTEN (SDD-15)
0025544 01 000453 003360 ----- -001-	29	ZR	R15	# CLEAR HIGH BITS (SD16-23)
0025545 01 000454 006054 ----- -001-	30	LR	R2,R12	
0025546 01 000455 006075 ----- -001-	31	LR	R3,R13	
0025547 01 000456 003541 000000 -001-	32	LI	R6,0	# LOAD SPECIAL PARITY
0025551 01 000460 037020 013027 CDGSPS -002-	33	BSA	MEMOP	
0025553			34 SIOM CLRSR	# CLEAR POSSIBLE NORMAL SELECT ERROR
0025553 01 000462 137020 012667 CDGSI0 -002-	35	BSA	MASIOM	
0025555 01 000464 043310 137000 -001-	36	DATA	CLRSR	# CLEAR STORE ERROR REGISTER
	37	CSTMP1	OW	# 12988
	-001-	38	NOTE	***** THE FIRST ADDRESS OVERWRITTEN IS 000465 *****

			41 CPATCH1 BGNP	0(640)	# 12988
0025556 01 000465 137000 113422 0000640 -001-	42	BL	XXXX05		
	-001-	43	NOTE	CPATCH1 'CSECT'	
	-001-	44	NOTE	***** PATCH AREA BEGINS AT 000640 *****	

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSPW ISSUE 05 PAGE 37

TEST 49 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

```

0113422          -001- 01 XXX405 PATCHAREA
0113422          02 CALL WAIT # TAKE A REAL TIME BREAK.
0113422 06 000440 173025 ----- -001- 03 BSAI WAIT # SUBROUTINE WAIT IS IN PROGRAM CBLM
0113423 06 000441 136100 025423 0000332 -001- 04 BX R4,WPRWLP1
0113425          05 ENDP # 12988
0113425          -001- 06 BL XXX406
0113425 06 000443 037000 025560 0000467 -001- 07 NOTE ***** LAST PATCH ADDRESS USED IS 000444 *****
0113425          -001- 08 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

0025560          -001- 11 XXX406 OMCONTINUE
0025560          12 RTN_TBL WPRWXT
0025560 01 000467 171400 ----- -001- 13 GA
0025561 01 000470 031000 025614 0025614 -001- 14 LAL RD,WPRWXT,RAO
0025563 01 000472 037000 011162 CDGNM -001- 15 BL INTRPNO3

0025565          17 EOW # 12988
0025565          -001- 18 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000473 *****

21 # IF WE REACH HERE, ALL WRITE PROTECT READ/WRITE TESTS HAVE PASSED

0025565          24 INDRFAIL
0025565          25 RTN_TBL ++4
0025565 01 000474 171400 ----- -001- 26 GA
0025566 01 000475 031000 025572 0025572 -001- 27 LAL RD,++4,RAO
0025570 01 000477 037000 011162 CDGNM -001- 28 BL INTRPNO3

-001- 30 # COMPARE NOT
-001- 31 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177777).
-001- 32 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0025572 01 000501 054014 ----- CDGNM -001- 33 VFD 1,L,PINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0025573 01 000502 000000 177777 -001- 34 ADDR 0(0177777)

-001- 36 # FAILTST
-001- 37 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPIDFL.
0025575 01 000504 020217 ----- CDGNM -001- 38 DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025576 01 000505 000025 ----- -001- 39 VFD 1,0 2,1 5,0 2,2 6,NFAILTST
-001- 40 VFD 16,WPIDFL

42 # AN ENTIRE WRITE PROTECT REGISTER WAS AFFECTED BY WRITING/READING ANOTHER REG

-001- 45 # COMPARE
-001- 46 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 47 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025577 01 000506 050014 ----- CDGNM -001- 48 VFD 1,L,PINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0025600 01 000507 000000 000000 -001- 49 ADDR 0(0000000)

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 38

TEST 49 SEGMENT 2

01:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

```

-001- 02 # FAILBIT
-001- 03 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS WPSLCXX
-001- 04 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0025602 01 000511 020220 ----- CDGNM
0025603 01 000512 000002 -----
-001- 05 VFD 1,0 2,1 5,0 2,2 6,NFLBITS
-001- 06 VFD 16,WPSLC

08 # A BIT IN A WRITE PROTECT REGISTER WAS AFFECTED BY WRITING/READING ANOTHER REG

-001- 11 # COMPARE
-001- 12 # COMPARE ON-LINE MCHB BIT PL TO 0.
-001- 13 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025604 01 000513 022414 ----- CDGNM
0025605 01 000514 000000 -----
-001- 14 VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,PL 6,NCOMPARE
-001- 15 VFD 15,0 1,0

-001- 17 # FAILTST
-001- 18 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 19 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025606 01 000515 020217 ----- CDGNM
0025607 01 000516 000022 -----
-001- 20 VFD 1,0 2,1 5,0 2,2 6,NFAILTST
-001- 21 VFD 16,WPSLCPL

23 # A PARITY LOW BIT IN A WRITE PROTECT REGISTER WAS WRITTEN/READ WITH ANOTHER REG

-001- 26 # COMPARE
-001- 27 # COMPARE ON-LINE MCHB BIT PH TO 0.
-001- 28 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025610 01 000517 022514 ----- CDGNM
0025611 01 000520 000000 -----
-001- 29 VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,PH 6,NCOMPARE
-001- 30 VFD 15,0 1,0

-001- 32 # FAILTST
-001- 33 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 34 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025612 01 000521 020217 ----- CDGNM
0025613 01 000522 000023 -----
-001- 35 VFD 1,0 2,1 5,0 2,2 6,NFAILTST
-001- 36 VFD 16,WPSLCPL

38 # PARITY HIGH BIT IN A WRITE PROTECT REGISTER WAS WRITTEN/READ WITH ANOTHER REG
39 WPRNXT
0025614
-001- 40 # NO3 CODE
-001- 41 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
0025614 01 000523 040043 000000 CDGNM
0025615 01 000524 000000 025617 0025617 -001- 42 VFD 1,0 2,2 7,0 6,NN03CD
-001- 43 ADDR **2

45 # THIS WILL RESTORE THE APPROPRIATE SUBCHANNEL ADDRESS IN REGISTER 9

```

STORE WRITE PROTECT TEST

PR-1C927-50

01:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 39

TEST 49 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

	01	CSTWP1	OW	0(526),0(530)	# 12706	
-001-	02	NOTE		***** THE FIRST ADDRESS OVERWRITTEN IS 000526 *****		
0025617			05	FINALE	WP1INIT	
0025617	01	000526	137020	012771	CDGSIO	-002- 06
0025621	01	000530	137000	025114	0025114	-001- 07
0025623	01	000532	171400	-----		-001- 08
0025624	01	000533	037000	011725	CDGNM	-001- 09
0025624						10
						-001- 11
				NOTE	***** THE LAST ADDRESS OVERWRITTEN IS 000534 *****	

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 40

A07

TEST 50

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSHW W77D

```

-001- 01 # *****
-001- 02 # *****
-001- 03 # **
-001- 04 # ** CU DIAGNOSTIC TEST NO. 50, MAIN_STORE_WRITE_PROTECT **
-001- 05 # **
-001- 06 # *****
-001- 07 # *****

```

0025626

-001- 10 CSTWP2 CSECT

0025626 02 000000 000145 ----- CDGNH

-001- 14 VFD 1,0 2,0 2,0 3,1 6,NBGN

```

18 # SEGMENT 1
19 # THIS SEGMENT CHECKS THAT A STORE COMMAND OTHER THAN WRITE PROTECT
20 # (MAINTENANCE) WRITE IS NOT ABLE TO LOAD THE WRITE PROTECT BITS. TO VERIFY THIS
21 # A NORMAL WRITE TO THE OFF-LINE STORE IS EXECUTED USING THE MEMORY OPERATION
22 # SUBROUTINE (MEMOP). BECAUSE THE WRITE PROTECT BITS HAVE ALL BEEN CLEARED BY
23 # A STORE INITIALIZE, IT IS SUFFICIENT TO PERFORM A WRITE OF ALL-ONES DATA TO
24 # EACH OF THE FOUR 16-BIT WRITE PROTECT REGISTERS. IF THE MAINTENANCE WRITE
25 # ENABLE (WPMWR1) IS STUCK-AT-ONE (HIGH) ON ANY OF THE BIT-SLICED WRITE PROTECT
26 # BITS, THEN THE WRITE PROTECT TEST (WPTST) WILL SET THE APPROPRIATE BIT(S) IN
27 # THE MAINTENANCE CHANNEL BUFFER TO BE DETECTED BY THE COMPARE DIAGNOSTIC MACRO.

```

```

30 # SEGMENT 2
31 # THIS SEGMENT VERIFIES THAT THE WRITE PROTECT BITS ARE WRITTEN AT THE
32 # PROPER TIME IN THE STORE CYCLE. FIRST, THE WRITE PROTECT REGISTER IS WRITTEN
33 # WITH THE ALL-ONES DATA PATTERN. AFTER THE STORE CONTROLLER CLOCK HAS BEEN
34 # STOPPED, THE INFORMATION REQUIRED TO EXECUTE A WRITE PROTECT WRITE OF ALL-
35 # ZEROS IS PUT ON THE OFF-LINE STORE BUS USING THE MEMORY OPERATION SUBROUTINE
36 # (MEMOD). THIS IS FOLLOWED BY INFORMATION FOR A 'SPARE WRITE' WHICH IS USED TO
37 # TERMINATE THE WRITE PROTECT (MAINTENANCE) WRITE STROBE ON THE INPUT OF THE
38 # WRITE PROTECT REGISTER. THIS TEST PROCEDURE IS REPEATED FOR ALL FOUR OF THE
39 # WRITE PROTECT REGISTERS. ONCE AGAIN IF THE INPUT STROBE (ERCOLL1) IS STUCK-AT-
40 # ONE (HIGH) ON ANY OF THE BIT-SLICED WRITE PROTECT BITS, THEN THE WRITE PROTECT
41 # TEST (WPTST) WILL LEAVE THE APPROPRIATE BIT(S) IN THE MAINTENANCE CHANNEL
42 # BUFFER SET, SO THAT IT(THEY) CAN BE DETECTED BY THE COMPARE DIAGNOSTIC MACRO.

```

```

45 # SEGMENT 3
46 # THIS SEGMENT CHECKS THAT A STORE COMMAND OTHER THAN WRITE PROTECT
47 # (MAINTENANCE) READ IS NOT ABLE TO ACCESS THE WRITE PROTECT BITS. TO VERIFY
48 # THIS AN ALL-ONES DATA PATTERN IS WRITTEN TO THE WRITE PROTECT REGISTER AND
49 # A 'SPARE READ' IS PERFORMED USING THE SAME ADDRESS AND THE SAME MEMORY

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSHW ISSUE 05 PAGE 41

TEST 50

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSMW

W77D

01 # OPERATION SUBROUTINE (MEMOP). THIS PROCEDURE IS FOLLOWED FOR ALL FOUR WRITE
02 # PROTECT REGISTERS. AFTER EACH SPARE READ THE DATA IS CHECKED FOR THE EXPECTED
03 # ALL-ZEROS PATTERN. IF THE WRITE PROTECT READ ENABLE (WPRD01) IS STUCK-AT-ONE
04 # (HIGH) ON ANY OF THE WRITE PROTECT BIT OUTPUT GATES, THEN A ONE WILL BE READ
05 # BACK IN THAT BIT POSITION. THIS DATA MISMATCH WILL EFFECT AN IMMEDIATE EXIT
06 # FROM THE TEST ROUTINE TO A FAULT RESOLUTION ROUTINE OF DIAGNOSTIC MACROS WHICH
07 # PINPOINTS THE FAILING BIT.

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSMW ISSUE 05 PAGE 42

TEST 50

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDG5WP

W77D

```

01 CSTMP2 OW 0(1),0(16) # 12736
-001- 02 NOTE ***** THE FIRST ADDRESS OVERRITTEN IS 000001 *****

0025627 02 000001 000144 ----- CDG5WP
05 WP2INIT PREPARE
-002- 06 # RTN_BLM
-002- 07 # TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
-002- 08 VFD 1,0 2,0 6,0 1,1 6,NRTNBLM

-002- 10 # SEND
-002- 11 # SEND 0(00000001) TO OFF-LINE MCHB.
-002- 12 # PARITY IS 0(2).
0025630 02 000002 047707 ----- CDG5WP
0025631 02 000003 000940 000001
-002- 13 VFD 1,0 2,2 7,8(01111111) 6,N2SEND
-002- 14 ADDR 0(00000001),0(2)

-002- 16 # MICRO
-002- 17 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-002- 18 # TO FIELD = MSXT FROM FIELD = MCHBFX
0025633 02 000005 020005 ----- CDG5WP
0025634 02 000006 106631 -----
-002- 19 VFD 1,0 2,1 7,0 6,NMICRO
-002- 20 VFD 8,MSXT 8,MCHBFX

-002- 22 # N03 CODE
-002- 23 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
0025635 02 000007 040043 000000 CDG5WP
0025636 02 000010 000000 025640 0025640
-002- 24 VFD 1,0 2,2 7,0 6,NNO3CD
-002- 25 ADDR **2

-001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
0025640 02 000012 103501 000151 TTYTBL
-002- 28 LI R4,MAS
0025642 02 000014 034500 043132 CTSD
-001- 29 STL R4,PAGSCR+24
-001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
-001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
-001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(IOADDR) IN PAGING BUFFER(PAGSCR)

0025644 02 000016 103240 -----
0025645 02 000017 004237 -----
-001- 34 ZR LOOPIND
-001- 35 SN LOOPIND,1 # ASSURE THAT LOOPIND IS ZERO BEFORE
# PROCEEDING WITH TEST

0025646 02 000020 072652 ----- CDG5WP
0025647 02 000021 037020 012757 CDG5IO
-001- 37 HN LOOPIND,LOOPIND
-002- 38 BSA CONTPREP
0025651 02 000023 172652 ----- CDG5WP
-001- 39 HN LOOPIND,LOOPIND
0025652 02 000024 137020 012667 CDG5IO
-003- 40 BSA MASIOH
0025654 02 000026 046071 -----
-002- 41 DATA MASCINT # INITIALIZE STORE CONTROLLER

0025655 02 000027 171400 -----
0025656 02 000030 031000 025662 CDG5WP
0025660 02 000032 037000 011162 CDG5WP
-002- 43 GA
-002- 44 LAL RD,**4,RAO
-002- 45 BL INTRPNO3

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5WP ISSUE 05 PAGE 43

TEST 50

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP W770

0025662

01
-001- 02

EOW
NOTE

12736

***** THE LAST ADDRESS OVERWRITTEN IS 000033 *****

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 44

TEST 50 SEGMENT 1

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 50 SEGMENT 1
-001- 04 # *
-001- 05 # *****

```

0025662 02 000034 000100 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(1) 6,NTTESTSEG

```

11 # THIS SEGMENT CHECKS THAT A STORE COMMAND OTHER THAN WRITE PROTECT
12 # (MAINTENANCE) WRITE IS NOT ABLE TO LOAD THE WRITE PROTECT BITS. TO VERIFY THIS
13 # A NORMAL WRITE TO THE OFF-LINE STORE IS EXECUTED USING THE MEMORY OPERATION
14 # SUBROUTINE (MEMOP). BECAUSE THE WRITE PROTECT BITS HAVE ALL BEEN CLEARED BY
15 # A STORE INITIALIZE, IT IS SUFFICIENT TO PERFORM A WRITE OF ALL-ONES DATA TO
16 # EACH OF THE FOUR 16-BIT WRITE PROTECT REGISTERS. IF THE MAINTENANCE WRITE
17 # ENABLE (WPMWR1) IS STUCK-AT-ONE (HIGH) ON ANY OF THE BIT-SLICED WRITE PROTECT
18 # BITS, THEN THE WRITE PROTECT TEST (WPTST) WILL SET THE APPROPRIATE BIT(S) IN
19 # THE MAINTENANCE CHANNEL BUFFER TO BE DETECTED BY THE COMPARE DIAGNOSTIC MACRO.

```

```

-001- 26 # NO3 CODE
-001- 27 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WPMWCK.
-001- 28 VFD 1,0 2,2 7,0 6,NN03CD
-001- 29 ADDR WPMWCK

```

0025663 02 000035 040043 000000 CDGNM
0025664 02 000036 000000 025666 0025666

```

0025666 31 WPMWCK
0025666 32 S10M MASCINT # CLEAR WRITE PROTECT BITS
0025666 33 BSA MASIOM
0025670 02 000040 137020 012667 CDGSI0 -002- 33
0025670 02 000042 046071 137020 -001- 34 DATA MASCINT # INITIALIZE STORE CONTROLLER
0025671 35 S10M FN0TMC
0025671 02 000043 137020 012667 CDGSI0 -002- 36 BSA MASIOM
0025673 02 000045 044470 ----- -001- 37 DATA FN0TMC # BLOCK TIMING TO FANOUT BOARDS (W/CLOCK)
0025674 02 000046 103103 ----- LN R4,3 # LOOP INDEX (ALL FOUR WRITE PROTECT REGS)
0025675 02 000047 031700 043140 CTSO 40 LAL R12,BASADDR,RA1
0025677 02 000051 040721 ----- 41 L R13,1(RA1) # ADDRESS FOR FIRST WRITE PROTECT REG
0025700 42 WPNMPL
0025700 43 NMLWRIT RAD,ONES
0025700 02 000052 103561 106200 -001- 44 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0025702 02 000054 003741 177777 -001- 45 LI R14,ONES # TO BE WRITTEN - SD0-15
0025704 02 000056 003761 177777 -001- 46 LI R15,ONES # TO BE WRITTEN - SD16-23
-001- 47 # IF ADDRESS(RAD) IS ADDRESS REG PAIR(RAD), LOAD R2 & R3 DIRECTLY FROM RAD
-001- 48 LR R2,R12
-001- 49 LR R3,R13

```

STORE WRITE PROTECT TEST

PR-1C927-50

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CDGSWP

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TEST 50 SEGMENT 1

0:06:56 2/06/81 ***

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDG5WP

W77D

```

0025710 02 000062 003140 ----- -001- 01 ZR R6 # NO SPECIAL PARITY
0025711 -001- 02 CALL MEMOP # INITIATE NORMAL WRITE(OFF-LINE)
0025711 02 000063 037020 013027 CDG5B5 -002- 03 BSA MEMOP
0025713 -002- 04 SIOM CLRSER # CLEAR POSSIBLE NORMAL SELECT ERROR
0025713 02 000065 137020 012667 CDG5IO -002- 05 BSA MASIOM
0025715 02 000067 043310 ----- -001- 06 DATA CLRSER # CLEAR STORE ERROR REGISTER
0025716 02 000070 106014 ----- 07 LR RD,R12 # SAVE CURRENT STORE SELECT BITS
0025717 02 000071 030420 012754 CDG5IO 08 LL R1,MODSIZE
0025721 02 000073 001721 ----- 09 AR R13,R1
0025722 02 000074 001721 ----- 10 AR R13,R1 # POINT TO NEXT WRITE PROTECT REGISTER
0025723 02 000075 055010 ----- 11 BNC WPNMBX # CARRY PAST LOW ADDRESS BITS?
0025724 02 000076 004701 ----- 12 AN R12,1 # IF SO, INCREMENT HI ADDRESS BITS
0025725 02 000077 030420 012756 CDG5IO 13 LL R1,STSELMSK
0025727 02 000101 014001 ----- 14 NR RD,R1 # ORIGINAL STORE SELECT BITS
0025730 02 000102 015421 ----- 15 COM R1
0025731 02 000103 014301 ----- 16 NR R12,R1 # NEW MODULE SELECT BITS
0025732 02 000104 014700 ----- 17 OR R12,RD # OLD STORE SELECT W/ NEW MOD SELECT BITS
0025733 18 WPNMBX
0025733 02 000105 136100 025700 0025700 19 BX R4,WPNMLP
0025735 21 # NO WRITE PROTECT BIT SHOULD HAVE BEEN AFFECTED BY THIS OPERATION
0025735 02 000107 003200 ----- 22 ZR R8 # ALL-ZEROS TEST PATTERN
0025736 02 000110 003363 ----- 23 LN R15,3 # CHECK ALL FOUR(4) REGISTERS
0025736 24 CSTWP2 OW 0(111) # 12988
-001- 25 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000111 *****

0025737 02 000111 037000 113500 0000716 -001- 28 CPATCH1 BGMP 0(716) # 12988
-001- 29 BL XXX459
-001- 30 NOTE CPATCH1 'CSECT'
-001- 31 NOTE ***** PATCH AREA BEGINS AT 000716 *****

0113500 -001- 34 XXX459 PATCHAREA
0113500 35 CALL WAIT # TAKE A REAL TIME TIME BREAK
0113500 06 000716 173025 ----- -001- 36 BSAI WXAIT # SUBROUTINE WAIT IS IN PROGRAM CBLM
0113501 37 CALL WPTST
0113501 06 000717 137020 025002 04 000 -001- 38 BSA WPTST
0113503 39 ENDP # 12988
0113503 06 000721 137000 025741 0000113 -001- 40 BL XXX463
-001- 41 NOTE ***** LAST PATCH ADDRESS USED IS 000722 *****
-001- 42 NOTE ***** NUMBER OF PATCH WORDS USED IS 5 (DECIMAL) *****

0025741 -001- 45 XXX463 OWCONTINUE # 12988
0025741 46 EOW
-001- 47 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000112 *****

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5WP ISSUE 05 PAGE 46

TEST 50 SEGMENT 1

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W770

```

0025741          -001- 01      RTN_TBL **4
0025741 02 000113 171400 ----- -001- 02      6A
0025742 02 000114 031000 025746 0025746 -001- 03      LAL      RO,**4,RAO
0025744 02 000116 037000 011162 CDGNM -001- 04      BL      INTRPNO3

-001- 06 #      COMPARE
-001- 07 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(00000000).
-001- 08 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025746 02 000120 050014 ----- CDGNM -001- 09      VFD      1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0025747 02 000121 000000 000000 -001- 10      ADDR      0(00000000)

-001- 12 #      FAILBIT
-001- 13 #      FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS WPSLCXX
-001- 14 #      WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0025751 02 000123 020220 ----- CDGNM -001- 15      VFD      1,0 2,1 5,0 2,2 6,NFLBITS
0025752 02 000124 000002 ----- -001- 16      VFD      16,WPSLC

```

18 # A WRITE PROTECT BIT HAS A MAINTENANCE WRITE ENABLE STUCK-AT-ONE

```

-001- 21 #      COMPARE
-001- 22 #      COMPARE ON-LINE MCHB BIT PL TO 0.
0025753 02 000125 022414 ----- CDGNM -001- 23 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025754 02 000126 000000 ----- -001- 24      VFD      1,LPINDX 2,1 1,0 1,SUCCESS 5,PL 6,NCOMPARE
-001- 25      VFD      15,0 1,0

-001- 27 #      FAILTST
-001- 28 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 29 #      DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025755 02 000127 020217 ----- CDGNM -001- 30      VFD      1,0 2,1 5,0 2,2 6,NFAILTST
0025756 02 000130 000022 ----- -001- 31      VFD      16,WPSLCPL

```

33 # A WRITE PROTECT REG PARITY LOW BIT HAS A MTC WRITE ENABLE STUCK-AT-ONE

```

-001- 36 #      COMPARE
-001- 37 #      COMPARE ON-LINE MCHB BIT PH TO 0.
0025757 02 000131 022514 ----- CDGNM -001- 38 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0025760 02 000132 000000 ----- -001- 39      VFD      1,LPINDX 2,1 1,0 1,SUCCESS 5,PH 6,NCOMPARE
-001- 40      VFD      15,0 1,0

-001- 42 #      FAILTST
-001- 43 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 44 #      DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0025761 02 000133 020217 ----- CDGNM -001- 45      VFD      1,0 2,1 5,0 2,2 6,NFAILTST
0025762 02 000134 000023 ----- -001- 46      VFD      16,WPSLCPL

```

STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 50 SEGMENT 1

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP W77D

01 # A WRITE PROTECT REG PARITY HIGH BIT HAS A NYC WRITE ENABLE STUCK-AT-ONE

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 48

TEST 50 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

```

-001- 01 # *****
-001- 02 # *****
-001- 03 # * TEST 50 SEGMENT 2 *
-001- 04 # *
-001- 05 # *****

```

0025763 02 000135 000200 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(2) 6,NTESTSEG

```

11 # THIS SEGMENT VERIFIES THAT THE WRITE PROTECT BITS ARE WRITTEN AT THE
12 # PROPER TIME IN THE STORE CYCLE. FIRST, THE WRITE PROTECT REGISTER IS WRITTEN
13 # WITH THE ALL-ONES DATA PATTERN. AFTER THE STORE CONTROLLER CLOCK HAS BEEN
14 # STOPPED, THE INFORMATION REQUIRED TO EXECUTE A WRITE PROTECT WRITE OF ALL-
15 # ZEROES IS PUT ON THE OFF-LINE STORE BUS USING THE MEMORY OPERATION SUBROUTINE
16 # (MEMOD). THIS IS FOLLOWED BY INFORMATION FOR A 'SPARE WRITE' WHICH IS USED TO
17 # TERMINATE THE WRITE PROTECT (MAINTENANCE) WRITE STROBE ON THE INPUT OF THE
18 # WRITE PROTECT REGISTER. THIS TEST PROCEDURE IS REPEATED FOR ALL FOUR OF THE
19 # WRITE PROTECT REGISTERS. ONCE AGAIN IF THE INPUT STROBE (ENCOLL1) IS STUCK-AT-
20 # ONE (HIGH) ON ANY OF THE BIT-SLICED WRITE PROTECT BITS, THEN THE WRITE PROTECT
21 # TEST (WPTST) WILL LEAVE THE APPROPRIATE BIT(S) IN THE MAINTENANCE CHANNEL
22 # BUFFER SET, SO THAT IT(HEY) CAN BE DETECTED BY THE COMPARE DIAGNOSTIC MACRO.

```

```

-001- 29 # NO3 CODE
-001- 30 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WPMWCK.
0025764 02 000136 040043 000000 CDGNM -001- 31 VFD 1,0 2,2 7,0 6,NN03CD
0025765 02 000137 000000 025767 0025767 -001- 32 ADDR WPMWCK

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0025767 34 WPMWCK
0025767 35 S10M MASCINT
0025767 02 000141 137020 012667 CDGSI0 -002- 36 BSA MAS10M
0025771 02 000143 046071 ----- -001- 37 DATA MASCINT # INITIALIZE STORE CONTROLLER
0025772 02 000144 131700 043140 CTSD -001- 38 LAL R12,BASADDR,RA1
0025774 02 000146 040721 ----- 39 L R13,1(RA1)
0025775 02 000147 003103 ----- 40 LN R4,5 # REPEAT FOR EACH WRITE PROTECT REG

```

```

0025776 42 WPMWCK
0025776 43 MTCWRT RAD,ONES
0025776 02 000150 103561 106203 -001- 44 LI R7,MTCWR
0026000 02 000152 003741 177777 -001- 45 LI R14,ONES # SET UP ONES TO BE WRITTEN (SD0-15)
0026002 02 000154 003360 ----- -001- 46 ZR R15 # CLEAR HIGH BITS (SD16-23)
0026003 02 000155 006054 ----- -001- 47 LR R2,R12
0026004 02 000156 006075 ----- -001- 48 LR R3,R13
0026005 02 000157 003541 000000 -001- 49 LI R6,0 # LOAD SPECIAL PARITY

```

STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 50 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDG5WP

W77D

```

0026007 02 000161 037020 013027 CDG5BS -002- 01 BSA MEMOP
0026011 02 000163 137020 012667 CDG5IO -002- 02 SIOM CLRSR # CLEAR POSSIBLE NORMAL SELECT ERROR
0026013 02 000165 043310 137020 -001- 03 BSA MASIOM
0026014 02 000166 137020 012667 CDG5IO -002- 04 DATA CLRSR # CLEAR STORE ERROR REGISTER
0026016 02 000170 046074 ----- -002- 05 SIOM CLKSTOP
0026017 02 000171 103561 106203 -001- 06 BSA MASIOM
0026021 02 000173 003741 000000 -001- 07 DATA CLKSTOP # DISABLE STORE CONTROLLER CLOCK OUTPUT
0026023 02 000175 003360 ----- -001- 08 MTCWRIT RAO,ZEROS,PRHOLD
0026024 02 000176 006054 ----- -001- 09 LI R7,MTCWR
0026025 02 000177 006075 ----- -001- 10 LI R14,ZEROS # SET UP ZEROS TO BE WRITTEN (SD0-15)
0026026 02 000200 003541 000020 -001- 11 LR R15 # CLEAR HIGH BITS (SD16-23)
0026030 02 000202 037020 013027 CDG5BS -001- 12 LR R2,R12
0026032 02 000204 137020 012667 CDG5IO -001- 13 LR R3,R13
0026034 02 000206 043314 ----- -001- 14 LI R6,PRHOLD # LOAD SPECIAL PARITY
0026035 02 000207 103561 106214 -002- 15 BSA MEMOP
0026037 02 000211 003741 000000 -001- 16 SIOM CLRSR|HALTCLK # CLEAR NORMAL SELECT ERROR W/ CLOCK OFF
0026041 02 000213 003761 000000 -001- 17 BSA MASIOM
0026043 02 000215 003541 000020 -001- 18 DATA CLRSR|HALTCLK # CLEAR STORE ERROR REGISTER
0026045 02 000217 006054 ----- -001- 19 SPRWRIT RAO,ZEROS,PRHOLD
0026046 02 000220 006075 ----- -001- 20 LI R7,SPRWR
0026047 02 000221 003000 ----- -001- 21 LI R14,ZEROS # TO BE WRITTEN - SD0-15
0026050 02 000222 037020 013027 CDG5BS -001- 22 LI R15,ZEROS # TO BE WRITTEN - SD16-23
0026052 02 000224 137020 012667 CDG5IO -001- 23 LI R6,PRHOLD # LOAD SPECIAL PARITY
0026053 02 000226 043314 137020 -001- 24 LR R2,R12
0026054 02 000228 015421 ----- -001- 25 LR R3,R13 # NO SPECIAL PARITY
0026055 02 000230 014001 ----- -002- 26 LR R0 # CLEAR NORMAL SELECT ERROR W/ CLOCK OFF
0026056 02 000232 015421 ----- -002- 27 BSA MEMOP
0026057 02 000234 014001 ----- -002- 28 SIOM CLRSR|HALTCLK # CLEAR STORE ERROR REGISTER
0026058 02 000236 015421 ----- -002- 29 BSA MASIOM
0026059 02 000238 015421 ----- -002- 30 DATA CLRSR|HALTCLK

32 # THIS WILL ONLY REMOVE WRITE PROTECT WRITE ENABLE(WPWR) TO PERMIT A CLEAR &
33 # GATE OF ANY WRITE PROTECT BIT WITH SHIFTER BIT ENABLE(ERCOLL) STUCK ACTIVE

0026055 02 000227 137020 012667 CDG5IO -002- 35 SIOM CLKSTRT
0026057 02 000231 046070 ----- -001- 36 BSA MASIOM
0026060 02 000232 106014 ----- -001- 37 DATA CLKSTRT # ENABLE STORE CONTROLLER CLOCK OUTPUT
0026061 02 000233 030420 012754 CDG5IO -001- 38 LR R0,R12 # SAVE CURRENT STORE SELECT BITS
0026063 02 000235 001721 ----- -001- 39 LL R1,MODSIZE
0026064 02 000236 001721 ----- -001- 40 AR R13,R1
0026065 02 000237 055010 ----- 0026075 41 AR R13,R1 # POINT TO NEXT WRITE PROTECT REGISTER
0026066 02 000240 004701 ----- 42 BNC WPMTBX # CARRY PAST LOW ADDRESS BITS?
0026067 02 000241 030420 012756 CDG5IO -001- 43 AN R12,1 # IF SO, INCREMENT HI ADDRESS BITS
0026071 02 000243 014001 ----- 44 LL R1,STSELMSK
0026072 02 000244 015421 ----- 45 NR R0,R1 # ORIGINAL STORE SELECT BITS
0026073 02 000245 014301 ----- 46 COM R1
0026074 02 000246 014700 ----- 47 NR R12,R1 # NEW MODULE SELECT BITS
0026075 02 000247 014700 ----- 48 OR R12,R0 # OLD STORE SELECT W/ NEW MOD SELECT BITS
0026076 02 000248 014700 ----- 49 CSTWP2 OW 0(247) # 12988

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STORE WRITE PROTECT TEST

PR-1C927-50

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CDG5WP

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TEST 50 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W770

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-001- 01      NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000247 *****

0026075
0026075 02 000247 137000 113427 0000645
-001- 04      04 WPWTBX
-001- 05      05 CPATCH1 BGNP 0(645) # 12988
-001- 06      06 BL XXX497
-001- 07      07 NOTE CPATCH1 'CSECT'
-001- 08      08 NOTE ***** PATCH AREA BEGINS AT 000645 *****

0113427
0113427 06 000645 124100 -----
-001- 11      11 XXX497 PATCHAREA
-001- 12      12 TBN R4,0 # TAKE A BREAK EVERY OTHER TIME THRU LOOP.

0113430 06 000646 054002 ----- 0113432
0113431
0113431 06 000647 073025 -----
-001- 14      14 BC NOBREAK
-001- 15      15 CALL WAIT # REAL TIME BREAK.
-001- 16      16 BSAI WXAII # SUBROUTINE WAIT IS IN PROGRAM CBLM
-001- 17      17 NOBREAK
-001- 18      18 BX R4,WPWTLP
-001- 19      19 ENDP # 12988
-001- 20      20 BL XXX500
-001- 21      21 NOTE ***** LAST PATCH ADDRESS USED IS 000653 *****
-001- 22      22 NOTE ***** NUMBER OF PATCH WORDS USED IS 7 (DECIMAL) *****

0026077
0026077 02 000251 103601 177777
-001- 25      25 XXX500 OWCONTINUE
-001- 26      26 LI R8,0(177777) # ALL ONES TEST PATTERN.
-001- 27      27 EOW # 12988
-001- 28      28 NOTE ***** THE LAST ADDRESS OVERWRITTEN IS 000252 *****

0026101 02 000253 003363 -----
-001- 31      31 LW R15,3 # CHECK ALL FOUR WRITE PROTECT REGS
-001- 32      32 CALL WPTST
-001- 33      33 BSA WPTST

0026104
0026104 02 000254 171400 -----
-001- 35      35 RTN_TBL **4
-001- 36      36 GA
-001- 37      37 LAL RD,**A,RAD
-001- 38      38 BL INTRPH03

-001- 40      40 # COMPARE NOT
-001- 41      41 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177777).
-001- 42      42 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026111 02 000263 054014 ----- CD6NM
-001- 43      43 VFD 1,L,PINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0026112 02 000264 000000 177777
-001- 44      44 ADDR 0(0177777)

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STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 50 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

```

-001- 01 #   FAILTST
-001- 02 #   FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPMWFL.
-001- 03 #   DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0026114 02 000266 020017 ----- CDGNM
0026115 02 000267 000024 -----
-001- 04 #   VFD      1,0 2,1 5,0 2,0 6,NFAILTST
-001- 05 #   VFD      16,WPMWFL

```

07 # ENTIRE WRITE PROTECT REGISTER WAS WRITTEN IMPROPERLY - SHIFTER ENABLE STUCK

```

-001- 10 #   COMPARE
-001- 11 #   COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 12 #   IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0026116 02 000270 050014 ----- CDGNM
0026117 02 000271 000000 000000
-001- 13 #   VFD      1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 14 #   ADDR      0(0000000)

```

```

-001- 16 #   FAILBIT
-001- 17 #   FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS WPSLCXX
0026121 02 000273 020220 ----- CDGNM
0026122 02 000274 000002 -----
-001- 18 #   WHERE XX IS THE LOWEST FAILING BIT NUMBER.
-001- 19 #   VFD      1,0 2,1 5,0 2,2 6,NFLBITS
-001- 20 #   VFD      16,WPSLC

```

22 # SHIFTER BIT ENABLE TO A WRITE PROTECT BIT IS STUCK ACTIVE

```

-001- 25 #   COMPARE
-001- 26 #   COMPARE ON-LINE MCHB BIT PL TO 0.
-001- 27 #   IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0026123 02 000275 022414 ----- CDGNM
0026124 02 000276 000000 -----
-001- 28 #   VFD      1,LPINDX 2,1 1,0 1,SUCCESS 5,PL 6,NCOMPARE
-001- 29 #   VFD      15,0 1,0

```

```

-001- 31 #   FAILTST
-001- 32 #   FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
0026125 02 000277 020217 ----- CDGNM
0026126 02 000300 000022 -----
-001- 33 #   DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
-001- 34 #   VFD      1,0 2,1 5,0 2,2 6,NFAILTST
-001- 35 #   VFD      16,WPSLCPL

```

37 # SHIFTER BIT ENABLE TO A PARITY LOW WRITE PROTECT BIT IS STUCK ACTIVE

```

-001- 40 #   COMPARE
-001- 41 #   COMPARE ON-LINE MCHB BIT PH TO 0.
-001- 42 #   IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0026127 02 000301 022514 ----- CDGNM
0026130 02 000302 000000 -----
-001- 43 #   VFD      1,LPINDX 2,1 1,0 1,SUCCESS 5,PH 6,NCOMPARE
-001- 44 #   VFD      15,0 1,0

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

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TEST 50 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

-001- 01 # FAILTST
-001- 02 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPH.
-001- 03 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0026131 02 000303 020217 ----- CDGNM
0026132 02 000304 000023 -----
-001- 04 VFD 1,0 2,1 5,0 2,2 6,NFAILTST
-001- 05 VFD 16,WPSLCPH

07 # SHIFTER BIT ENABLE TO A PARITY HIGH WRITE PROTECT BIT IS STUCK ACTIVE

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

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TEST 50 SEGMENT 3

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 50 SEGMENT 3
-001- 04 # *
-001- 05 # *****

```

0026133 02 000305 000300 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(3) 6,NTESTSEG

```

11 # THIS SEGMENT CHECKS THAT A STORE COMMAND OTHER THAN WRITE PROTECT
12 # (MAINTENANCE) READ IS NOT ABLE TO ACCESS THE WRITE PROTECT BITS. TO VERIFY
13 # THIS AN ALL-ONES DATA PATTERN IS WRITTEN TO THE WRITE PROTECT REGISTER AND
14 # A 'SPARE READ' IS PERFORMED USING THE SAME ADDRESS AND THE SAME MEMORY
15 # OPERATION SUBROUTINE (MEMOP). THIS PROCEDURE IS FOLLOWED FOR ALL FOUR WRITE
16 # PROTECT REGISTERS. AFTER EACH SPARE READ THE DATA IS CHECKED FOR THE EXPECTED
17 # ALL-ZEROS PATTERN. IF THE WRITE PROTECT READ ENABLE (WPROB1) IS STUCK-AT-ONE
18 # (HIGH) ON ANY OF THE WRITE PROTECT BIT OUTPUT GATES, THEN A ONE WILL BE READ
19 # BACK IN THAT BIT POSITION. THIS DATA MISMATCH WILL EFFECT AN IMMEDIATE EXIT
20 # FROM THE TEST ROUTINE TO A FAULT RESOLUTION ROUTINE OF DIAGNOSTIC MACROS WHICH
21 # PINPOINTS THE FAILING BIT.

```

```

-001- 28 # NO3 CODE
-001- 29 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WPRDCK.
0026134 02 000306 040043 000000 CDGNM -001- 30 VFD 1,0 2,2 7,0 6,NNO3CD
0026135 02 000307 000000 026137 0026137 -001- 31 ADDR WPRDCK

```

```

0026137 33 WPRDCK
0026137 34 SIOM MASCINT
0026137 02 000311 137020 012667 CDGSI0 -002- 35 BSA MASION
0026141 02 000313 046071 ----- -001- 36 DATA MASCINT # INITIALIZE STORE CONTROLLER
0026142 02 000314 131700 043140 CTSD 37 LAL R12,BASADDR,RA1
0026144 02 000316 040721 ----- 38 R13,1(RA1)
0026145 02 000317 003103 ----- 39 LN R4,5 # REPEAT FOR EACH WRITE PROTECT REG

```

```

0026146 41 WPRDLP
0026146 42 MTCWRIT RAO,ONES
0026146 02 000320 103561 106203 -001- 43 LI R7,MTCWR
0026150 02 000322 003741 177777 -001- 44 LI R14,ONES # SET UP ONES TO BE WRITTEN (SD0-15)
0026152 02 000324 003360 ----- -001- 45 ZR R15 # CLEAR HIGH BITS (SD16-23)
0026153 02 000325 006054 ----- -001- 46 LR R2,R12
0026154 02 000326 006075 ----- -001- 47 LR R3,R13
0026155 02 000327 003541 000000 -001- 48 LI R6,0 # LOAD SPECIAL PARITY
0026157 02 000331 037020 013027 CDGSSB -002- 49 BSA MEMOP

```

STORE WRITE PROTECT TEST

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TEST 50 SEGMENT 3

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP W77D

```

0026161 02 000333 137020 012667 CDGSIO -002- 02 SION CLRSER # CLEAR POSSIBLE NORMAL SELECT ERROR
0026161 02 000333 043310 ----- -001- 03 BSA MASIOM # CLEAR STORE ERROR REGISTER
0026163 02 000335 043310 ----- -001- 03 DATA CLRSER

05 # SET ALL WRITE PROTECT BITS

0026164 02 000336 103561 106274 -001- 07 SPRREAD RAO
0026164 02 000336 103561 106274 -001- 08 LI R7,SPRRD
0026166 02 000340 006054 ----- -001- 09 LR R2,R12
0026167 02 000341 006075 ----- -001- 10 LR R3,R13
0026170 02 000342 003140 ----- -001- 11 ZR R6 # NO SPECIAL PARITY
0026171 02 000343 037020 013027 CDGSBS -002- 12 BSA MEMOP # CLEAR POSSIBLE NORMAL SELECT ERROR
0026173 02 000345 137020 012667 CDGSIO -002- 14 BSA MASIOM # CLEAR STORE ERROR REGISTER
0026175 02 000347 043310 ----- -001- 15 DATA CLRSER
0026176 02 000350 112403 ----- 16 UNPK MCHB # WERE ANY WRITE PROTECT BITS READ BACK?
0026177 02 000351 014063 ----- 17 TZ R3 # IF SO, GO TO FAULT RESOLUTION ROUTINE
0026200 02 000352 055024 ----- 18 BNC WPRDFL # WAS WRITE PROTECT PARITY LOW READ BACK?
0026201 02 000353 057403 ----- 19 TSRPL MCHB
0026202 02 000354 054022 ----- 21 BC WPRDFL # WAS WRITE PROTECT PARITY HIGH READ BACK?
0026203 02 000355 057423 ----- 22 TSRPH MCHB
0026204 02 000356 054020 ----- 24 BC WPRDFL # SAVE CURRENT STORE SELECT BITS
0026205 02 000357 006014 ----- 25 LR R0,R12
0026206 02 000360 030420 012754 CDGSIO 26 LL R1,MODSIZE
0026210 02 000362 001721 ----- 27 AR R15,R1
0026211 02 000363 001721 ----- 28 AR R13,R1 # POINT TO NEXT WRITE PROTECT REGISTER
0026212 02 000364 055010 ----- 29 BNC WPRDBX # CARRY PAST LOW ADDRESS BITS?
0026213 02 000365 004701 ----- 30 AN R12,1 # IF SO, INCREMENT HI ADDRESS BITS
0026214 02 000366 030420 012756 CDGSIO 31 LL R1,STSELMSK # ORIGINAL STORE SELECT BITS
0026216 02 000370 014001 ----- 32 NR R0,R1
0026217 02 000371 015421 ----- 33 COM R1
0026220 02 000372 014301 ----- 34 NR R12,R1 # NEW MODULE SELECT BITS
0026221 02 000373 014700 ----- 35 OR R12,R0 # OLD STORE SELECT W/ NEW MOD SELECT BITS
0026222 02 000374 136100 026146 0026146 36 WPRDBX
0026222 02 000374 136100 026146 0026146 37 BX R4,WPRDLP

39 # FAILURE ROUTINE FOR WRITE PROTECT READ CHECK

0026224 02 000376 171400 ----- 41 WPRDFL
0026224 02 000376 171400 ----- 42 RTN_TBL **4
0026225 02 000377 031000 026231 0026231 -001- 43 GA #
0026227 02 000401 037000 011162 CDGNM -001- 44 LAL R0,**4,RAO
0026227 02 000401 037000 011162 CDGNM -001- 45 BL INTRPN03

```

STORE WRITE PROTECT TEST

PR-1C927-50

TEST 50 SEGMENT 3

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP W77D

```

-001- 01 # COMPARE
-001- 02 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 03 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0026231 02 000403 050014 ----- CDGNM -001- 04 VFD 1,LPINDX 2,2 1,1,SUCCESS 5,0 6,NCOMPARE
0026232 02 000404 000000 000000 -001- 05 ADDR 0(0000000)

-001- 07 # FAULTBIT
-001- 08 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS WPSLCXX
-001- 09 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0026234 02 000406 020220 ----- CDGNM -001- 10 VFD 1,0 2,1 5,0 2,2 6,NFLBITS
0026235 02 000407 000002 ----- -001- 11 VFD 16,WPSLC

13 # THE WRITE PROTECT READ ENABLE(WPRD) ON A WRITE PROTECT OUTPUT IS STUCK ACTIVE

-001- 16 # COMPARE
-001- 17 # COMPARE ON-LINE MCHB BIT PL TO 0.
-001- 18 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0026236 02 000410 022414 ----- CDGNM -001- 19 VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,PL 6,NCOMPARE
0026237 02 000411 000000 ----- -001- 20 VFD 15,0 1,0

-001- 22 # FAULTST
-001- 23 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 24 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0026240 02 000412 020217 ----- CDGNM -001- 25 VFD 1,0 2,1 5,0 2,2 6,NFAULTST
0026241 02 000413 000022 ----- -001- 26 VFD 16,WPSLCPL

28 # A WRITE PROTECT PARITY LOW HAS WRITE PROTECT READ ENABLE(WPRD) STUCK ACTIVE

-001- 31 # COMPARE
-001- 32 # COMPARE ON-LINE MCHB BIT PH TO 0.
-001- 33 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0026242 02 000414 022514 ----- CDGNM -001- 34 VFD 1,LPINDX 2,1 1,0 1,SUCCESS 5,PH 6,NCOMPARE
0026243 02 000415 000000 ----- -001- 35 VFD 15,0 1,0

-001- 37 # FAULTST
-001- 38 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSLCPL.
-001- 39 # DATA WORDS IN FAILURE MESSAGE ARE SPECIFIED BY "TTY_DATA" MACRO.
0026244 02 000416 020217 ----- CDGNM -001- 40 VFD 1,0 2,1 5,0 2,2 6,NFAULTST
0026245 02 000417 000023 ----- -001- 41 VFD 16,WPSLCPL

43 # A WRITE PROTECT PARITY HIGH HAS WRITE PROTECT READ ENABLE(WPRD) STUCK ACTIVE

```

STORE WRITE PROTECT TEST

PR-1C927-50

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CD9

TEST 50 SEGMENT 3

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSHW

W770

```

-001- 01 #      NO3 CODE
-001- 02 #      PROCESS 3ACC CODED ROUTINE AT ADDRESS WPRDXT.
-001- 03      VFD 1,0 2,2 7,0 6,NN03CD
-001- 04      ADDR WPRDXT
0026246 02 000420 040043 000000 CDGSHW
0026247 02 000421 000000 026251 0026251
0026251
06 WPRDXT

```

STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 50 SEGMENT 3

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP W77D

	01	CSTWP2	ON	0(423),0(425)	# 12736	
-001-	02		NOTE	***** THE FIRST ADDRESS OVERWRITTEN IS 000423 *****		
0026251			05	FINALE	WP2INIT	
0026251	02	000423	137020	012771	CD6SIO	-002- 06
0026253	02	000425	137000	025651	0025651	-001- 07
0026255	02	000427	171400	-----		-001- 08
0026256	02	000430	037000	011725	CD6NM	-001- 09
						10
						NOTE
	-001-	11		***** THE LAST ADDRESS OVERWRITTEN IS 000431 *****		

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 58

TEST 51

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP W77D

```

-001- 01 # *****
-001- 02 # *****
-001- 03 # **
-001- 04 # ** CU DIAGNOSTIC TEST NO. 51, MAIN_STORE_WRITE_PROTECT
-001- 05 # **
-001- 06 # *****
-001- 07 # *****

```

0026260

-001- 10 CSTWPF3 CSECT

0026260 03 000000 000145 ----- CDGNM

-001- 14 VFD 1,0 2,0 2,0 2,0 3,1 6,NBGN

```

18 # SEGMENT 1
19 # THIS SEGMENT BEGINS THE TESTING OF THE WRITE PROTECT CHECK CIRCUITRY BY
20 # CHECKING THE WRITE PROTECT BIT INPUTS TO THE SELECTOR GATES FOR STUCK-ACTIVE
21 # (HIGH) FAULTS AND ALSO VERIFYING THAT THE OUTPUT COLLECTOR-TIE OF THE SELECTOR
22 # GATES IS NOT BEING JAMMED ACTIVE (LOW). THIS IS DONE BY INITIALIZING THE
23 # WRITE PROTECT REGISTERS (RESETTING ALL WRITE PROTECT BITS) AND EXECUTING A
24 # WRITE IN EACH 4K WRITE PROTECT BLOCK. IF A WRITE PROTECT ERROR IS RECORDED
25 # FOR EACH WRITE, THEN THE OUTPUT COLLECTOR TIE, IN-WRITE-PROTECT NET (TINWP),
26 # MUST BE JAMMED LOW. IF A SINGLE ERROR OCCURS, ONE OF THE WRITE PROTECT BIT
27 # INPUTS TO ITS SELECTOR GATE MUST BE STUCK HIGH. SINCE THERE ARE EIGHT WRITE
28 # PROTECT BITS PER BIT-SLICED BOARD, IT IS ONLY NECESSARY TO KEEP EIGHT ERROR
29 # BITS TO RESOLVE THE LATTER FAULT.

```

```

32 # SEGMENT 2
33 # THIS SEGMENT CHECKS THAT EACH INDIVIDUAL WRITE PROTECT BIT CAN CAUSE A
34 # WRITE PROTECT ERROR WHEN A WRITE IS ATTEMPTED WITHIN THE 4K BLOCK ASSOCIATED
35 # WITH THAT SPECIFIC BIT. THE TEST INVOLVES SETTING ONE WRITE PROTECT BIT AND
36 # ATTEMPTING A WRITE INTO A LOCATION WITHIN THE 4K BLOCK THAT IS SUPPOSED TO BE
37 # PROTECTED BY THAT PARTICULAR BIT. THIS IS REPEATED FOR EACH ONE OF THE 64
38 # WRITE PROTECT BITS IN THE CONTROLLER. IF THE OUTPUT OF ONE WRITE PROTECT
39 # SELECTOR GATE (FFWPX-AG10/BG10) IS STUCK INACTIVE (HIGH), THEN A WRITE
40 # PROTECT ERROR WILL BE INDICATED FOR EVERY BIT EXCEPT THE ONE CONNECTED TO THIS
41 # GATE. IF ONE OF THE WRITE PROTECT BLOCK ENABLES (WPSEG0-7) TO THE SELECTOR
42 # GATES IS STUCK INACTIVE (LOW), THEN THE WRITE PROTECT ERROR WILL NOT SHOW UP
43 # IN THAT BIT-SLICE OF THE ERROR RESULT REGISTER. IF A MODULE SELECT ENABLE
44 # (MSEL0-7) TO THE SELECTOR GATES IS STUCK INACTIVE, THEN THE ABSENCE OF A WRITE
45 # PROTECT ERROR WILL ALSO BE INDICATED IN ONE OF ERROR RESULT BIT-SLICES (O-7)
46 # AND AGAIN BE RESOLVABLE TO A SPECIFIC BIT-SLICED BOARD. THIS TEST ALSO
47 # VERIFIES THAT THE CIRCUITRY THAT DECODES THE SPECIFIC WRITE PROTECT BLOCK
48 # WHERE THE WRITE IS BEING ATTEMPTED WORKS PROPERLY. FROM THE RESULTANT PATTERN
49 # OF WRITE PROTECT ERRORS (OR THE ABSENCE THEREOF) IT IS POSSIBLE TO RESOLVE

```

STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 51

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSPW

W770

01 # WHICH OF THE FOUR UNTESTED ADDRESS LEADS TO THE DECODER CIRCUITRY IS FAULTY.

04 # SEGMENT 3

05 # THIS SEGMENT CHECKS THAT WRITES IN UNPROTECTED AREAS DO NOT PRODUCE WRITE
 06 # PROTECT ERRORS EVEN IF EVERY OTHER AREA IN THE STORE IS PROTECTED, I.E., ALL
 07 # OF THE WRITE PROTECT BITS ARE SET EXCEPT ONE CORRESPONDING TO THE AREA WHERE
 08 # THE WRITE IS ATTEMPTED. FUNCTIONALLY THIS TEST IS THE CONVERSE OF THE
 09 # PRECEDING SEGMENT. IF ONE OF THE WRITE PROTECT SEGMENT ENABLES (WPSEGO-7)
 10 # TO A WRITE PROTECT BIT SELECTOR GATES (FFMPX-AG10/BG10) IS STUCK ACTIVE
 11 # (HIGH) ON THE GATE, THEN THE WRITE PROTECT ERROR WILL SHOW UP IN THE BIT
 12 # OF THE TEST RESULT REGISTER CORRESPONDING TO THAT FAULTY BIT-SLICED BOARD.
 13 # ON THE OTHER HAND, IF THAT SAME ENABLE (WPSEGO-7) IS STUCK ACTIVE BETWEEN THE
 14 # DECODER CIRCUIT AND THE BIT-SLICED BOARD, THEN A WRITE PROTECT ERROR WILL BE
 15 # RECORDED FOR EVERY BIT-SLICED BOARD EXCEPT THE FAULTY ONE. SIMILARLY, IF A
 16 # MODULE SELECT ENABLE (MSEL0-7) IS STUCK ACTIVE (LOW) BETWEEN THE MODULE-SELECT
 17 # DECODER CIRCUIT AND ALL OF THE BIT-SLICED BOARDS, THEN ANY OF THE BIT-SLICED
 18 # BOARD OR THE BOARD THAT CONTAINS THE DECODER MAY BE FAULTY. AND IF THE
 19 # STUCK-ACTIVE ENABLE FAULT IS CONFINED TO ONE BIT-SLICED BOARD, THEN IT WILL
 20 # BE INDICATED BY A SINGLE WRITE PROTECT ERROR IN THE TEST RESULT REGISTER IN
 21 # THE BIT POSITION CORRESPONDING TO THE FAULTY BOARD.

24 # SEGMENT 4

25 # THIS SEGMENT CHECKS THAT THE WRITE-COMMAND ENABLE (NOTWCO) ON THE INPUT.
 26 # TO THE WRITE PROTECT ERROR FF (SERB) IS NOT STUCK-AT-ONE (HIGH). THIS CAN BE
 27 # FUNCTIONALLY TESTED VERY EASILY BY SETTING A WRITE PROTECT BIT TO PROTECT THE
 28 # FIRST 4K BLOCK IN THE STORE UNDER TEST AND IMMEDIATELY CLEARING THE SAME BIT
 29 # USING AN ADDRESS THAT IS WITHIN THE FIRST 4K. THE WRITE PROTECT COMMAND USED
 30 # TO CLEAR THE BIT SHOULD FORCE THE WRITE-COMMAND ENABLE INACTIVE (LOW), SO
 31 # THAT THE WRITE PROTECT ERROR IS NOT SET. IF THE CONTENTS OF THE ERROR REGISTER
 32 # RETRIEVED FROM THE OFF-LINE PROCESSOR SHOW THE HW-WRITE-ERROR BIT (HWRTERR)
 33 # SET, THEN THE WRITE-COMMAND ENABLE MUST BE STUCK-ACTIVE (HIGH).

STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 51

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

```

01 CSTWP3 0W 0(1),0(16) # 12706
-001- 02 NOTE ***** THE FIRST ADDRESS OVERWRITTEN IS 000001 *****

0026261
05 W3INIT PREPARE
-002- 06 # RTN_BLM
-002- 07 # TURN OFF AUTOMATIC RETURNS TO BLM EVERY 20 TABLE ENTRIES.
-002- 08 VFD 1,0 2,0 6,0 1,1 6,NRTNBLM

-002- 10 # SEND
-002- 11 # SEND 0(0000001) TO OFF-LINE MCHB.
-002- 12 # PARITY IS 0(2).
0026262 03 000002 047707 ----- CDGNM
-002- 13 VFD 1,0 2,2 7,0(0111111) 6,N2SEND
0026263 03 000003 000040 000001
-002- 14 ADDR 0(0000001),0(2)

-002- 16 # MICRO
-002- 17 # PERFORM MICRO INSTRUCTION IN OFF-LINE CU.
-002- 18 # TO FIELD = MSXT FROM FIELD = MCHBZF
0026265 03 000005 020005 ----- CDGNM
-002- 19 VFD 1,0 2,1 7,0 6,NMICRO
0026266 03 000006 106631 -----
-002- 20 VFD 8,MSXT 8,MCHBZF

-002- 22 # NO3 CODE
-002- 23 # PROCESS 3ACC CODED ROUTINE AT ADDRESS **2.
0026267 03 000007 040043 000000 CDGNM
-002- 24 VFD 1,0 2,2 7,0 6,NN03CD
0026270 03 000010 000000 026272 0026272
-002- 25 ADDR **2

-001- 27 # SUBSTITUTE 'MAS' FOR 'LOOP' IN TROUBLE PRINTOUT
-002- 28 LI R4,MXAS
-001- 29 STL R4,PAGSCR+2A
0026272 03 000012 103501 000151 TTYTBL
0026274 03 000014 034500 043132 CTSD
-001- 30 # USE THE DIAGNOSTIC LOOP INDEX(LOOPIND) TO ACCESS THE PROPER I/Q
-001- 31 # SUBCHANNEL ADDRESS IN THE MAIN STORE CONTROLLER I/Q SUBCHANNEL TABLE
-001- 32 # (MASCIOSC) AND STORE IT IN THE ASSIGNED SLOT(LOADR) IN PAGING BUFFER(PAGSCR)

0026276 03 000016 103240 -----
0026277 03 000017 004257 -----
-001- 34 ZR LOOPIND
-001- 35 SN LOOPIND,1
# ASSURE THAT LOOPIND IS ZERO BEFORE
# PROCEEDING WITH TEST

0026300 03 000020 072652 ----- CDGNM
0026301 03 000021 037020 012757 CDGS10
-001- 37 HN LOOPIND,LOOPIND
-002- 38 JSA CONTPREP
0026303 03 000023 172652 ----- CDGNM
-001- 39 HN LOOPIND,LOOPIND
0026304 03 000024 137020 012667 CDGS10
-003- 40 BSA MASIOM
0026306 03 000026 046071 -----
-002- 41 DATA MASCINT # INITIALIZE STORE CONTROLLER

0026307 03 000027 171400 -----
0026310 03 000030 031000 026314
-002- 43 GA RO,**4,RAD
-002- 44 LAL INTRPN03
0026312 03 000032 037000 011162 CDGNM
-002- 45 BL

```

STORE WRITE PROTECT TEST

PR-1C927-50

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B01

TEST 51

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

0026314

01
-001- 02

EOW
NOTE

12706

***** THE LAST ADDRESS OVERWRITTEN IS 000033 *****

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 62

TEST 51 SEGMENT 1

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 51 SEGMENT 1
-001- 04 # *
-001- 05 # *****

```

0026314 03 000034 000100 ----- CDGNN -001- 08 VFD 1,0 2,0 2,0 5,0(1) 6,NTESTSEG

```

11 # THIS SEGMENT BEGINS THE TESTING OF THE WRITE PROTECT CHECK CIRCUITRY BY
12 # CHECKING THE WRITE PROTECT BIT INPUTS TO THE SELECTOR GATES FOR STUCK-ACTIVE
13 # (HIGH) FAULTS AND ALSO VERIFYING THAT THE OUTPUT COLLECTOR-TIE OF THE SELECTOR
14 # GATES IS NOT BEING JAMMED ACTIVE (LOW). THIS IS DONE BY INITIALIZING THE
15 # WRITE PROTECT REGISTERS (RESETTING ALL WRITE PROTECT BITS) AND EXECUTING A
16 # WRITE IN EACH 4K WRITE PROTECT BLOCK. IF A WRITE PROTECT ERROR IS RECORDED
17 # FOR EACH WRITE, THEN THE OUTPUT COLLECTOR TIE, IN-WRITE-PROTECT NET (TINWP),
18 # MUST BE JAMMED LOW. IF A SINGLE ERROR OCCURS, ONE OF THE WRITE PROTECT BIT
19 # INPUTS TO ITS SELECTOR GATE MUST BE STUCK HIGH. SINCE THERE ARE EIGHT WRITE
20 # PROTECT BITS PER BIT-SLICED BOARD, IT IS ONLY NECESSARY TO KEEP EIGHT ERROR
21 # BITS TO RESOLVE THE LATTER FAULT.

```

```

-001- 24 # NO3 CODE
-001- 25 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WPCKTSTO.
-001- 26 VFD 1,0 2,2 7,0 6,NN03CD
0026315 03 000035 040043 000000 CDGNN
0026316 03 000036 000000 026320 -001- 27 ADDR WPCKTSTO

```

```

0026320 29 WPCKTSTO
0026320 03 000040 131700 043140 CTSD 30 LAL R12,BASADDR,RA1
0026322 03 000042 040721 ----- 31 L R13,1(RA1) # FIRST WRITE PROTECT BLOCK IN STORE
0026323 03 000043 003100 ----- 32 ZR BITPTR # CLEAR ERROR BIT POINT
0026324 03 000044 003120 ----- 33 ZR RESULT # CLEAR ERROR RESULT REGISTER
0026325 34 WPCKLPO
0026325 35 SION MASCINT
0026325 03 000045 137020 012667 CDGSI0 -002- 36 BSA MASION
0026327 03 000047 046071 103401 -001- 37 DATA MASCINT # INITIALIZE STORE CONTROLLER
0026330 03 000050 103401 025750 38 LI RD,ZERX # ZERO OFF-LINE ERROR REGISTER
0026332 03 000052 007400 ----- 39 LSR WCHTR,RD
0026333 40 LNCH LDWIRL
0026333 -001- 41 CALL SLDWIRL
0026333 -002- 42 BSA SLDWIRL
0026335 44 SION FNOTINC
0026335 03 000055 137020 012667 CDGSI0 -002- 45 BSA MASION
0026337 03 000057 044470 ----- -001- 46 DATA FNOTINC # BLOCK TIMING TO FANOUT BOARDS(W/CLOCK)
0026340 47 NMLWRIT RAO
0026340 03 000060 103561 106200 -001- 48 LI R7,B(1000110010000000) # MAIN MEMORY STATUS
0026342 03 000062 003741 000000 -001- 49 LI R14,0 # TO BE WRITTEN - S00-15

```

STORE WRITE PROTECT TEST

PR-1C927-50

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TEST 51 SEGMENT 1

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDG5WP

W77D

```

0026344 03 000064 003761 000000      -001-;01  LI      R15,0          # TO BE WRITTEN - SD16-23
-001- 02 # IF ADDRESS(RA0) IS ADDRESS REG PAIR(RA0), LOAD R2 & R3 DIRECTLY FROM RA0
-001- 03  LR      R2,R12
0026347 03 000067 016073 -----      -001- 04  LR      R3,R13
0026350 03 000070 003140 -----      -001- 05  ZR      R6          # NO SPECIAL PARITY
0026351 03 000071 037020 013027 CD6SBS -001- 06  CALL    MEMOP      # INITIATE NORMAL WRITE(OFF-LINE)
0026353 03 000073 137020 012667 CD6SIO -002- 07  BSA     MEMOP
0026353 03 000073 137020 012667 CD6SIO -002- 08  SIOH    CLRSER      # CLEAR POSSIBLE NORMAL SELECT ERROR
0026355 03 000075 043310 103401 -001- 09  BSA     MASIOH
-001- 10  DATA    CLRSER      # CLEAR STORE ERROR REGISTER

12 # RETRIEVE OFF-LINE ERROR REGISTER
0026356 03 000076 103401 114652      14      LI      RD,MCHBXT+E(8)*ERXF
0026360 03 000100 007400 -----      15      LSR     MCHTR,RD
0026361 03 000101 037020 111075 CSYSUB -001- 16  LMCH    LDMIRL
0026361 03 000101 037020 111075 CSYSUB -002- 17  CALL    SLDMIRL
0026363 03 000103 103401 000261 -002- 18  BSA     SLDMIRL
0026363 03 000103 103401 000261 -001- 19  LMCH    RTNMCHB
0026365 03 000105 073027 -----      -001- 20  LI      RD,RTNMCHB
0026365 03 000105 073027 -----      -001- 21  CALL    SMCH
-002- 22  BSAI    SMCH      # SUBROUTINE SMCH IS IN PROGRAM CSYSUB

24 # RECORD WRITE PROTECT ERROR FROM OFF-LINE CONTROL UNIT
0026366 03 000106 112403 -----      26      UNPK    MCHB
0026367 03 000107 024073 -----      27      TBN     R3,S(MWRTER)      # OFF-LINE WRITE PROTECT ERROR?
0026370 03 000110 055002 -----      28      BNC     WPCKOKO
0026371 03 000111 026524 -----      29      SBR     RESULT,BITPTR      # RECORD WRITE PROTECT ERROR
0026372 03 000112 104501 -----      30      WPCKOKO
0026373 03 000113 024103 -----      31      AN      BITPTR,1
0026374 03 000114 055002 -----      32      TBN     BITPTR,3
0026374 03 000114 055002 -----      33      BNC     WPCKONO      # INCREMENT BIT POINTER
0026375 03 000115 003100 -----      34      ZR      BITPTR      # NINTH BIT-SLICE?
0026376 03 000115 003100 -----      35      WPCKONO      # IF NOT, SKIP RESET
0026376 03 000115 003100 -----      36      CALL    WAIT      # RESET BIT POINTER TO FIRST BIT-SLICE
0026376 03 000116 173025 -----      -001- 37  BSAI    WXAIT      # TAKE A CALL-PROCESSING BREAK
0026377 03 000117 103720 010000 -----      38      AI      R13,WPBLSKZE      # SUBROUTINE WAIT IS IN PROGRAM CBLM
0026401 03 000121 055724 -----      39      BNC     WPCKLPO      # NEXT WRITE PROTECT BLOCK
0026402 03 000122 004701 -----      40      AN      R12,1
0026403 03 000123 030400 012756 CD6SIO 41      LL      RD,STSELMASK      # INCREMENT HIGH ADDRESS BITS
0026405 03 000125 030420 043140 CTS0 42      LL      R1,BASADDR
0026407 03 000127 014020 -----      43      R1,RO
0026410 03 000130 014014 -----      44      NR      RD,R12      # STORE UNDER TEST
0026411 03 000131 020020 -----      45      CR      R1,RO      # CURRENT WRITE PROTECT CHECK ADDRESS
0026412 03 000132 054713 -----      46      BC      WPCKLPO      # ADDRESS STILL WITHIN STORE UNDER TEST?
                                # IF SO, CONTINUE TEST

```

STORE WRITE PROTECT TEST

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TEST 51 SEGMENT 1

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MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

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```

0026413 03 000133 007465 ----- 01      LSR      MCHB,RESULT      # PREPARE FOR COMPARE
0026414                                02      RTN_TBL  **4
0026414 03 000134 071400 ----- -001- 03      GA
0026415 03 000135 031000 026421 0026421 -001- 04      LAL      RD,**4,RAD
0026417 03 000137 037000 011162 CDGNM -001- 05      BL      INTRPN03

-001- 07 #      COMPARE NOT
-001- 08 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0177777).
-001- 09 #      IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026421 03 000141 054014 ----- CDGNM -001- 10      VFD      1,L,PINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0026422 03 000142 000000 177777 -001- 11      ADDR      0(0177777)

-001- 13 #      FAILTST
-001- 14 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPCKSTK1.
-001- 15 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0026424 03 000144 020017 ----- CDGNM -001- 16      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0026425 03 000145 000002 ----- -001- 17      VFD      16,WPCKSTK1

19 # CONSTANT WRITE PROTECT ERROR IMPLIES IN-WRITE-PROTECT SIGNAL STUCK ACTIVE(LOW)

-001- 22 #      COMPARE
-001- 23 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 24 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0026426 03 000146 050014 ----- CDGNM -001- 25      VFD      1,L,PINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0026427 03 000147 000000 000000 -001- 26      ADDR      0(0000000)

-001- 28 #      FAILBIT
-001- 29 #      FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS WPS1BSXX
-001- 30 #      WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0026431 03 000151 020020 ----- CDGNM -001- 31      VFD      1,0 2,1 5,0 2, 6,NFLBITS
0026432 03 000152 000003 ----- -001- 32      VFD      16,WPS1BS

34 # A WRITE PROTECT BIT INPUT TO A SELECTOR GATE ON BIT-SLICE IS STUCK ACTIVE (HI)

```

STORE WRITE PROTECT TEST

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TEST 51 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDG5WP W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 51 SEGMENT 2
-001- 04 # *
-001- 05 # *****

```

0026433 03 000153 000200 ----- CDG5NM -001- 08 VFD 1,0 2,0 2,0 5,D(2) 6,NTTESTEG

```

11 # THIS SEGMENT CHECKS THAT EACH INDIVIDUAL WRITE PROTECT BIT CAN CAUSE A
12 # WRITE PROTECT ERROR WHEN A WRITE IS ATTEMPTED WITHIN THE 4K BLOCK ASSOCIATED
13 # WITH THAT SPECIFIC BIT. THE TEST INVOLVES SETTING ONE WRITE PROTECT BIT AND
14 # ATTEMPTING A WRITE INTO A LOCATION WITHIN THE 4K BLOCK THAT IS SUPPOSED TO BE
15 # PROTECTED BY THAT PARTICULAR BIT. THIS IS REPEATED FOR EACH ONE OF THE 64
16 # WRITE PROTECT BITS IN THE CONTROLLER. IF THE OUTPUT OF ONE WRITE PROTECT
17 # SELECTOR GATE (FFWPX-AG10/BG10) IS STUCK INACTIVE (HIGH), THEN A WRITE
18 # PROTECT ERROR WILL BE INDICATED FOR EVERY BIT EXCEPT THE ONE CONNECTED TO THIS
19 # GATE. IF ONE OF THE WRITE PROTECT BLOCK ENABLES (WPSEG0-7) TO THE SELECTOR
20 # GATES IS STUCK INACTIVE (LOW), THEN THE WRITE PROTECT ERROR WILL NOT SHOW UP
21 # IN THAT BIT-SLICE OF THE ERROR RESULT REGISTER. IF A MODULE SELECT ENABLE
22 # (MSEL0-7) TO THE SELECTOR GATES IS STUCK INACTIVE, THEN THE ABSENCE OF A WRITE
23 # PROTECT ERROR WILL ALSO BE INDICATED IN ONE OF ERROR RESULT BIT-SLICES (0-7)
24 # AND AGAIN BE RESOLVABLE TO A SPECIFIC BIT-SLICED BOARD. THIS TEST ALSO
25 # VERIFIES THAT THE CIRCUITRY THAT DECODES THE SPECIFIC WRITE PROTECT BLOCK
26 # WHERE THE WRITE IS BEING ATTEMPTED WORKS PROPERLY. FROM THE RESULTANT PATTERN
27 # OF WRITE PROTECT ERRORS (OR THE ABSENCE THEREOF) IT IS POSSIBLE TO RESOLVE
28 # WHICH OF THE FOUR UNTESTED ADDRESS LEADS TO THE DECODER CIRCUITRY IS FAULTY.

```

```

-001- 31 # NO3 CODE
-001- 32 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WPCKTST1.
0026434 03 000154 040043 000000 CDG5NM VFD 1,0 2,2 7,0 6,NN03CD
0026435 03 000155 000000 026437 -001- 34 ADDR WPCKTST1

```

```

0026437 36 WPCKTST1
0026437 03 000157 103101 ----- 37 LN BITPTR,1 # START WITH WRITE PROTECT BIT 0
0026440 03 000160 003120 ----- 38 ZR RESULT # CLEAR RESULT STORAGE REGISTER
0026441 03 000161 031700 043140 CTSD 39 LAL R12,BASADDR,RA1
0026443 03 000163 040721 ----- 40 L R13,1(RA1) # STORE UNDER TEST
0026444 41 WPCKLP1
0026444 42 SIOM MASCINT
0026444 03 000164 137020 012667 CDG5IO -002- 43 BSA MASIOH
0026446 03 000166 046071 103401 -001- 44 DATA MASCINT
0026447 03 000167 103401 025750 45 LI RO,ZERX # INITIALIZE STORE CONTROLLER
0026451 03 000171 007400 ----- 46 LSR MCHTR,RO # ZERO OFF-LINE ERROR REGISTER
0026452 47 LMCH LDMIRL
0026452 48 CALL SLDMIRL
0026452 03 000172 037020 111075 CSYSUB -002- 49 BSA SLDMIRL

```

STORE WRITE PROTECT TEST

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TEST 51 SEGMENT 2

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MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W77D

0024454	03	000174	104054	-----	01	LR	R2,R12		
0024455	03	000175	003060	-----	02	ZR	R3	# ADDRESS TO LOAD WRITE PROTECT REGISTER	
0024456	03	000176	003561	106203	03	LI	R7,MTCHR	# MHSR = MAINTENANCE WRITE	
0024460	03	000200	006344	-----	04	LR	R14,BITPTR	# WRITE PROTECT BIT TO BE SET	
0024461	03	000201	003360	-----	05	ZR	R15	# CLEAR HIGH BITS (S016-23)	
0024462					06	CALL	MEMOP	# SET WRITE PROTECT BIT	
0024462	03	000202	037020	013027	CDGSBS	-001-	07	BSA	MEMOP
0024464					08	SIOM	CLRSER	# CLEAR POSSIBLE NORMAL SELECT ERROR	
0024464	03	000204	137020	012667	CDGSIO	-002-	09	BSA	MASIOH
0024466	03	000206	043310	-----	-001-	10	DATA	CLRSER	# CLEAR STORE ERROR REGISTER
0024667	03	000207	104054	-----	12	LR	R2,R12		
0024670	03	000210	006075	-----	13	LR	R3,R13	# ADDRESS TO ATTEMPT WRITE	
0024671	03	000211	003561	106200	14	LI	R7,MHLWR	# MHSR = NORMAL WRITE	
0024673					15	CALL	MEMOP	# ATTEMPT WRITE OF PROTECTED LOCATION	
0024673	03	000213	037020	013027	CDGSBS	-001-	16	BSA	MEMOP
0024675					17	SIOM	CLRSER	# CLEAR POSSIBLE NORMAL SELECT ERROR	
0024675	03	000215	137020	012667	CDGSIO	-002-	18	BSA	MASIOH
0024677	03	000217	043310	103401	-001-	19	DATA	CLRSER	# CLEAR STORE ERROR REGISTER

21 # RETRIEVE OFF-LINE ERROR REGISTER

0026500	03	000220	103401	114652	23	LI	RO,MCHBXT+E(8)+ERXF		
0026502	03	000222	007400	-----	24	LSR	MCNTR,RO		
0026503					25	LMCH	LDMIRL		
0026503					-001-	26	CALL	SLDMIRL	
0026503	03	000223	037020	111075	CDYSUB	-002-	27	BSA	SLDMIRL
0026505					28	LMCH	RTNMCB		
0026505	03	000225	103401	000261	-001-	29	LI	RO,RTNMCB	
0026507					-001-	30	CALL	SMCH	
0026507	03	000227	073027	-----	-002-	31	BSAI	SMCH	# SUBROUTINE SMCH IS IN PROGRAM CYSUB

33 # RECORD ABSENCE OF WRITE PROTECT ERROR FROM OFF-LINE CONTROL UNIT

0026510	03	000230	112403	-----	35	UNPK	MCHB		
0026511	03	000231	024073	-----	36	TBN	R3,S(MWRTER)	# OFF-LINE WRITE PROTECT ERROR?	
0026512	03	000232	054002	-----	37	BC	WPCKOK1		
0026513	03	000233	014524	-----	38	OR	RESULT,BITPTR	# IF NOT, SET BIT IN RESULT REGISTER	
0026514					39	WPCKOK1			
0026514					40	CALL	WAIT	# TAKE A CALL-PROCESSING BREAK	
0026514	03	000234	173025	-----	-001-	41	BSAI	WXAII	# SUBROUTINE WAIT IS IN PROGRAM CBLM
0026515	03	000235	103720	010000	42	AI	R13,WPBLKSZE	# POINT TO NEXT WRITE PROTECT BLOCK	
0026517	03	000237	010517	-----	43	RLN	BITPTR,1	# NEXT WRITE PROTECT BIT	
0026520	03	000240	024100	-----	44	TBN	BITPTR,0	# NEW WRITE PROTECT REGISTER?	
0026521	03	000241	053723	-----	45	ENC	WPCKLP1	# IF NOT, RETURN FOR REPEAT	

STORE WRITE PROTECT TEST

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TEST 51 SEGMENT 2

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MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDG5WP

W77D

01 # CHECK FOR TEST COMPLETION

0026522 03 000242 004701 -----	03	AN	R12,1	# INCREMENT HIGH ADDRESS BITS
0026523 03 000243 030400 012756 CDG5IO	04	LL	RD,STSELMSK	
0026525 03 000245 030420 043140 CTSD	05	LL	R1,BASADDR	
0026527 03 000247 014020 -----	06	NR	R1,RO	# ADDRESS OF STORE UNDER TEST
0026530 03 000250 014014 -----	07	NR	RD,R12	# ADDRESS OF STORE BEING TESTED
0026531 03 000251 020001 -----	08	CR	RD,R1	# STILL IN STORE UNDER TEST?
0026532 03 000252 054712 ----- 0026444	09	BC	WPKCLP1	# IF 50, REPEAT

11 # COLLAPSE RESULT TO RESOLVE TO ONE OF EIGHT BIT-SLICED BOARDS

0026533 03 000253 006005 -----	13	LR	RD,RESULT	
0026534 03 000254 010410 -----	14	RRN	RD,8	
0026535 03 000255 014520 -----	15	OR	RESULT,RO	# COMBINE RESULTS FOR SAME BIT-SLICE
0026536 03 000256 003522 000377	16	NI	RESULT,B(11111111)	# CLEAR UPPER 8 BITS
0026540 03 000260 007465 -----	17	LSR	MCHB,RESULT	# PREPARE FOR COMPARE
0026541			RTN_TBL ***	
0026541 03 000261 071400 -----	-001- 18	GA		
0026542 03 000262 031000 026546	-001- 19	LAL	RD,***,RAD	
0026544 03 000264 037000 011162 CDGNN	-001- 21	BL	INTRPN03	

-001- 23 # COMPARE NOT
 -001- 24 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000377).
 -001- 25 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
 -001- 26 VFD 1,LPINDX 2,2 1,1,SUCCESS 5,0 6,NCOMPARE
 -001- 27 ADDR 0(0000377)

0026546 03 000266 054014 ----- CDGNN	-001- 29 #	FAULTST	
0026547 03 000267 000000 000377	-001- 30 #	FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS MSL15SA0.	
	-001- 31 #	DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.	
0026551 03 000271 020017 ----- CDGNN	-001- 32	VFD 1,0 2,1 5,0 2,0 6,NFAULTST	
0026552 03 000272 000013 -----	-001- 33	VFD 16,MSL15SA0	

35 # STORE ADDRESS BIT 15 (SA15) IS STUCK-AT-ZERO IN THE MODULE-SELECT CIRCUITRY

0026553 03 000273 054014 ----- CDGNN	-001- 38 #	COMPARE NOT	
0026554 03 000274 000000 000252	-001- 39 #	COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000252).	
	-001- 40 #	IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.	
	-001- 41	VFD 1,LPINDX 2,2 1,1,SUCCESS 5,0 6,NCOMPARE	
	-001- 42	ADDR 0(0000252)	
	-001- 44 #	FAULTST	
0026556 03 000276 020017 ----- CDGNN	-001- 45 #	FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPB12SA0.	
0026557 03 000277 000014 -----	-001- 46 #	DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.	
	-001- 47	VFD 1,0 2,1 5,0 2,0 6,NFAULTST	
	-001- 48	VFD 16,WPB12SA0	

STORE WRITE PROTECT TEST

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TEST 51 SEGMENT 2

01:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSPW

W77D

01 # STORE ADDRESS BIT 12 (SA12) IS STUCK-AT-ZERO IN WRITE PROTECT SEGMENT SELECT

```

-001- 04 # COMPARE NOT
-001- 05 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000125).
-001- 06 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026560 03 000300 054014 ----- CDGSM
-001- 07 # VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0026561 03 000301 000000 000125
-001- 08 # ADDR 0(0000125)

-001- 10 # FAILTST
-001- 11 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPB12SA1.
-001- 12 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0026563 03 000303 020017 ----- CDGSM
-001- 13 # VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0026564 03 000304 000015 -----
-001- 14 # VFD 16,WPB12SA1

```

16 # STORE ADDRESS BIT 12 (SA12) IS STUCK-AT-ONE IN WRITE PROTECT SEGMENT SELECT

```

-001- 19 # COMPARE NOT
-001- 20 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000314).
-001- 21 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026565 03 000305 054014 ----- CDGSM
-001- 22 # VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0026566 03 000306 000000 000314
-001- 23 # ADDR 0(0000314)

-001- 25 # FAILTST
-001- 26 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPB13SA0.
-001- 27 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0026570 03 000310 020017 ----- CDGSM
-001- 28 # VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0026571 03 000311 000016 -----
-001- 29 # VFD 16,WPB13SA0

```

31 # STORE ADDRESS BIT 13 (SA13) IS STUCK-AT-ZERO IN WRITE PROTECT SEGMENT SELECT

```

-001- 34 # COMPARE NOT
-001- 35 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000063).
-001- 36 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026572 03 000312 054014 ----- CDGSM
-001- 37 # VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0026573 03 000313 000000 000063
-001- 38 # ADDR 0(0000063)

-001- 40 # FAILTST
-001- 41 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPB13SA1.
-001- 42 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0026575 03 000315 020017 ----- CDGSM
-001- 43 # VFD 1,0 2,1 5,0 2,0 6,NFAILTST
0026576 03 000316 000017 -----
-001- 44 # VFD 16,WPB13SA1

```

STORE WRITE PROTECT TEST

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CDGSPW

ISSUE 05

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TEST 51 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP W77D

01 # STORE ADDRESS BIT 13 (SA13) IS STUCK-AT-ONE IN WRITE PROTECT SEGMENT SELECT

```

-001- 04 # COMPARE NOT
-001- 05 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000360).
-001- 06 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
-001- 07 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 08 ADDR 0(0000360)

-001- 10 # FAILTST
-001- 11 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPB14SA0.
-001- 12 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
-001- 13 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 14 VFD 16,WPB14SA0

```

0026577 03 000317 054014 ----- CDGNN
0026600 03 000320 000000 000360

0026602 03 000322 020017 ----- CDGNN
0026603 03 000323 000020 -----

16 # STORE ADDRESS BIT 14 (SA14) IS STUCK-AT-ZERO IN WRITE PROTECT SEGMENT SELECT

```

-001- 19 # COMPARE NOT
-001- 20 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000017).
-001- 21 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
-001- 22 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 23 ADDR 0(0000017)

-001- 25 # FAILTST
-001- 26 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPB14SA1.
-001- 27 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
-001- 28 VFD 1,0 2,1 5,0 2,0 6,NFAILTST
-001- 29 VFD 16,WPB14SA1

```

0026604 03 000324 054014 ----- CDGNN
0026605 03 000325 000000 000017

0026607 03 000327 020017 ----- CDGNN
0026610 03 000330 000021 -----

31 # STORE ADDRESS BIT 14 (SA14) IS STUCK-AT-ONE IN WRITE PROTECT SEGMENT SELECT

```

-001- 34 # COMPARE
-001- 35 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 36 # IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
-001- 37 VFD 1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
-001- 38 ADDR 0(0000000)

-001- 40 # FAILBIT
-001- 41 # FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS WPS0BSXX
-001- 42 # WHERE XX IS THE LOWEST FAILING BIT NUMBER.
-001- 43 VFD 1,0 2,1 5,0 2, 6,NFLBITS
-001- 44 VFD 16,WPS0BS

```

0026611 03 000331 050014 ----- CDGNN
0026612 03 000332 000000 000000

0026614 03 000334 020020 ----- CDGNN
0026615 03 000335 000022 -----

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D02

TEST 51 SEGMENT 2

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

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D1 # ONE OF THE BIT-SLICED WRITE PROTECT SELECTOR GATES IS FAULTY

STORE WRITE PROTECT TEST

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TEST 51 SEGMENT 3

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

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```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 51 SEGMENT 3
-001- 04 # *
-001- 05 # *****

```

0026616 03 000336 000300 ----- CDGNM -001- 08 VFD 1,0 2,0 2,0 5,D(3) 6,NTESTSEG

```

11 # THIS SEGMENT CHECKS THAT WRITES IN UNPROTECTED AREAS DO NOT PRODUCE WRITE
12 # PROTECT ERRORS EVEN IF EVERY OTHER AREA IN THE STORE IS PROTECTED, I.E., ALL
13 # OF THE WRITE PROTECT BITS ARE SET EXCEPT ONE CORRESPONDING TO THE AREA WHERE
14 # THE WRITE IS ATTEMPTED. FUNCTIONALLY THIS TEST IS THE CONVERSE OF THE
15 # PRECEDING SEGMENT. IF ONE OF THE WRITE PROTECT SEGMENT ENABLES (WPSEGO-7)
16 # TO A WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) IS STUCK ACTIVE
17 # (HIGH) ON THE GATE, THEN THE WRITE PROTECT ERROR WILL SHOW UP IN THE BIT
18 # OF THE TEST RESULT REGISTER CORRESPONDING TO THAT FAULTY BIT-SLICED BOARD.
19 # ON THE OTHER HAND, IF THAT SAME ENABLE (WPSEGO-7) IS STUCK ACTIVE BETWEEN THE
20 # DECODER CIRCUIT AND THE BIT-SLICED BOARD, THEN A WRITE PROTECT ERROR WILL BE
21 # RECORDED FOR EVERY BIT-SLICED BOARD EXCEPT THE FAULTY ONE. SIMILARLY, IF A
22 # MODULE SELECT ENABLE (MSEL0-7) IS STUCK ACTIVE (LOW) BETWEEN THE MODULE-SELECT
23 # DECODER CIRCUIT AND ALL OF THE BIT-SLICED BOARDS, THEN ANY OF THE BIT-SLICED
24 # BOARD OR THE BOARD THAT CONTAINS THE DECODER MAY BE FAULTY. AND IF THE
25 # STUCK-ACTIVE ENABLE FAULT IS CONFINED TO ONE BIT-SLICED BOARD, THEN IT WILL
26 # BE INDICATED BY A SINGLE WRITE PROTECT ERROR IN THE TEST RESULT REGISTER IN
27 # THE BIT POSITION CORRESPONDING TO THE FAULTY BOARD.

```

```

-001- 30 # NO3_CODE
-001- 31 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WPCKTST2.
0026617 03 000337 040043 000000 CDGNM -001- 32 VFD 1,0 2,2 7,0 6,NN03CD
0026620 03 000340 000000 026622 0026622 -001- 33 ADDR WPCKTST2

```

```

0026622 35 WPCKTST2
0026622 03 000342 103101 ----- 36 LN BITPTR,1 # START WITH WRITE PROTECT BIT 0
0026623 03 000343 003120 ----- 37 ZR RESULT # CLEAR RESULT STORAGE REGISTER
0026624 03 000344 031700 043140 CTSD 38 LAL R12,BASADDR,RA1
0026626 03 000346 040721 ----- 39 L R13,1(RA1) # STORE UNDER TEST

```

```

41 # FIRST, SET UP DESIRED WRITE PROTECT BIT PATTERN
42 # NOTE: ONLY 15 WRITE PROTECT BITS NEED TO BE SET AT ANY ONE TIME IN ORDER TO
43 # DETECT THE SPECIFIED STUCK-AT-ONE FAULTS ON OR AMONG BIT-SLICED BOARDS.

```

```

0026627 45 WPCKLP2
0026627 46 SIOM MASCINT
0026627 03 000347 137020 012667 CDGSI0 -002- 47 BSA MASIOM
0026631 03 000351 046071 103401 -001- 48 DATA MASCINT # INITIALIZE STORE CONTROLLER
0026632 03 000352 103401 025750 49 LI R0,ZERX # ZERO OFF-LINE ERROR REGISTER

```

STORE WRITE PROTECT TEST

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TEST 51 SEGMENT 3

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MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

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```

0026634 03 000354 007400 ----- 01 LSR MCHTR,RO
0026635 02 LMCH LDMIRL
0026635 -001- 03 CALL SLDMIRL
0026635 03 000355 037020 111075 CSYSUB -002- 04 BSA R2,R12
0026637 03 000357 106054 ----- 05 LR R3
0026640 03 000360 003060 ----- 06 ZR R3
0026641 03 000361 003561 106203 07 LI R7,HTCWR
0026643 03 000363 015504 ----- 08 COM BITPTR
0026644 03 000364 006344 ----- 09 LR R14,BITPTR
0026645 03 000365 003360 ----- 10 R15
0026646 03 000366 037020 013027 CDG6SB -001- 11 CALL MEMOP
0026650 12 BSA MEMOP
0026650 13 SIOM CLRSE
0026650 03 000370 137020 012667 CDG6SIO -002- 14 BSA MASIOM
0026652 03 000372 043310 ----- -001- 15 DATA CLRSE

```

17 # SECOND, ATTEMPT WRITE IN UNPROTECTED AREA

```

0026653 03 000373 106054 ----- 19 LR R2,R12
0026654 03 000374 006075 ----- 20 LR R3,R13
0026655 03 000375 003561 106200 21 LI R7,NMLWR
0026657 03 000377 037020 013027 CDG6SB -001- 22 CALL MEMOP
0026661 23 BSA MEMOP
0026661 03 000401 137020 012667 CDG6SIO -002- 24 SIOM CLRSE
0026663 03 000403 043310 103401 -001- 26 DATA CLRSE

```

28 # THIRD, RETRIEVE OFF-LINE ERROR REGISTER

```

0026664 03 000404 103401 114652 30 LI RO,MCHBXT+E(B)+ERXf
0026666 03 000406 007400 ----- 31 LSR MCHTR,RO
0026667 32 LMCH LDMIRL
0026667 -001- 33 CALL SLDMIRL
0026667 03 000407 037020 111075 CSYSUB -002- 34 BSA SLDMIRL
0026671 35 LMCH RTNMCHB
0026671 03 000411 103401 000261 -001- 36 LI RO,RTNMCHB
0026673 -001- 37 CALL SMCH
0026673 -002- 38 BSAI SMXCH

```

SUBROUTINE SMCH IS IN PROGRAM CSYSUB

40 # RECORD WRITE PROTECT ERROR FROM OFF-LINE CONTROL UNIT

```

0026674 03 000414 115504 ----- 42 COM BITPTR
0026675 03 000415 012403 ----- 43 UNPK MCHB
0026676 03 000416 024073 ----- 44 TBN R3,S(WRITER)
0026677 03 000417 055002 ----- 45 BNC WPKCKOZ
0026700 03 000420 014524 ----- 46 OR RESULT,BITPTR
0026701 47 WPKCKOZ
0026701 48 CALL WAIT
0026701 03 000421 173025 ----- -001- 49 BSAI WAIT

```

TAKE A CALL-PROCESSING BREAK

SUBROUTINE WAIT IS IN PROGRAM CBLM

STORE WRITE PROTECT TEST

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TEST 51 SEGMENT 3

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MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSMV W770

```

0026702 03 000422 103720 010000      01      AI      R13,WPBLKSIZE      # POINT TO NEXT WRITE PROTECT BLOCK
0026704 03 000424 010517 -----      02      RLN      BITPTR,1      # NEXT WRITE PROTECT BIT
0026705 03 000425 024100 -----      03      TBN      BITPTR,0      # NEW WRITE PROTECT REGISTER?
0026706 03 000426 055721 ----- 0026627 04      BNC      WPCKLP2      # IF NOT, RETURN FOR REPEAT

06 # FINALLY, CHECK FOR TEST COMPLETION

0026707 03 000427 004701 -----      08      AN      R12,1      # INCREMENT HIGH ADDRESS BITS
0026710 03 000430 030400 012756 CDGSI0 09      LL      R0,STSELMSK
0026712 03 000432 030420 043140 CTSD 10      LL      R1,BASADDR
0026714 03 000434 014020 -----      11      NR      R1,R0      # ADDRESS OF STORE UNDER TEST
0026715 03 000435 014014 -----      12      NR      R0,R12      # ADDRESS OF STORE BEING TESTED
0026716 03 000436 020001 -----      13      CR      R0,R1      # STILL IN STORE UNDER TEST?
0026717 03 000437 054710 ----- 0026627 14      BC      WPCKLP2      # IF SO, REPEAT

16 # COLLAPSE RESULT TO RESOLVE FAULT TO ONE OF EIGHT BIT-SLICED BOARDS

0026720 03 000440 006005 -----      18      LR      R0,RESULT
0026721 03 000441 010410 -----      19      RRN      R0,8
0026722 03 000442 014520 -----      20      OR      RESULT,R0      # COMBINE RESULTS FOR SAME BIT-SLICE
0026723 03 000443 003522 000377      21      NI      RESULT,B(11111111)      # CLEAR UPPER EIGHT BITS
0026725 03 000445 007465 -----      22      LSR      MCHB,RESULT      # PREPARE FOR COMPARE
0026726 -----      23      RTN_TBL ***
0026726 03 000446 071400 ----- -001- 24      GA
0026727 03 000447 031000 026733 0026733 -001- 25      LAL      R0,+,A,RAD
0026731 03 000451 037000 011162 CDGNM -001- 26      BL      INTRPN03

-001- 28 # COMPARE NOT
-001- 29 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000377).
-001- 30 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026733 03 000453 054014 ----- CDGNM -001- 31      VFD      1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0026734 03 000454 000000 000377 -001- 32      ADDR      0(0000377)

-001- 34 # FAILTST
-001- 35 # FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS MSELXSA1.
-001- 36 # DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0026736 03 000456 020017 ----- CDGNM -001- 37      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0026737 03 000457 000032 ----- -001- 38      VFD      16,MSELXSA1

40 # A MODULE SELECT ENABLE TO WRITE PROTECT BIT SELECTOR GATES IS STUCK ACTIVE

-001- 43 # COMPARE NOT
-001- 44 # COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000376).
-001- 45 # IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026740 03 000460 054014 ----- CDGNM -001- 46      VFD      1,LPINDX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0026741 03 000461 000000 000376 -001- 47      ADDR      0(0000376)

```

STORE WRITE PROTECT TEST

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MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

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```

-001- 01 #      FAILTST
-001- 02 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSEG0S1.
-001- 03 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0026743 03 000463 020017 ----- CDGNN      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0026744 03 000464 000033 -----      VFD      16,WPSEG0S1

07 # WRITE PROTECT SEGMENT 0 ENABLE (WPSEG0) IS STUCK ACTIVE (LOW) BETWEEN BOARDS

-001- 10 #      COMPARE NOT
-001- 11 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000375).
-001- 12 #      IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026745 03 000465 054014 ----- CDGNN      VFD      1,LPINDX 2,2 1,1 1,SUCCESS      5,0 6,NCOMPARE
0026746 03 000466 000000 000375 -----      ADDR      0(0000375)

-001- 16 #      FAILTST
-001- 17 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSEG1S1.
-001- 18 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0026750 03 000470 020017 ----- CDGNN      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0026751 03 000471 000034 -----      VFD      16,WPSEG1S1

22 # WRITE PROTECT SEGMENT 1 ENABLE (WPSEG1) IS STUCK ACTIVE (LOW) BETWEEN BOARDS

-001- 25 #      COMPARE NOT
-001- 26 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000373).
-001- 27 #      IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026752 03 000472 054014 ----- CDGNN      VFD      1,LPINDX 2,2 1,1 1,SUCCESS      5,0 6,NCOMPARE
0026753 03 000473 000000 000373 -----      ADDR      0(0000373)

-001- 31 #      FAILTST
-001- 32 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSEG2S1.
-001- 33 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0026755 03 000475 020017 ----- CDGNN      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0026756 03 000476 000035 -----      VFD      16,WPSEG2S1

37 # WRITE PROTECT SEGMENT 2 ENABLE (WPSEG2) IS STUCK ACTIVE (LOW) BETWEEN BOARDS

-001- 40 #      COMPARE NOT
-001- 41 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000367).
-001- 42 #      IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026757 03 000477 054014 ----- CDGNN      VFD      1,LPINDX 2,2 1,1 1,SUCCESS      5,0 6,NCOMPARE
0026760 03 000500 000000 000367 -----      ADDR      0(0000367)

```

STORE WRITE PROTECT TEST

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TEST 51 SEGMENT 3

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MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

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```

-001- 01 #      FAILTST
-001- 02 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSEG3S1.
-001- 03 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0026762 03 000502 020017 ----- CDGNM -001- 04 #      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0026763 03 000503 000036 ----- -001- 05 #      VFD      16,WPSEG3S1

```

07 # WRITE PROTECT SEGMENT 3 ENABLE (WPSEG3) IS STUCK ACTIVE (LOW) BETWEEN BOARDS

```

-001- 10 #      COMPARE NOT
-001- 11 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000357).
-001- 12 #      IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026764 03 000504 054014 ----- CDGNM -001- 13 #      VFD      1,LINDEX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0026765 03 000505 000000 000357 -001- 14 #      ADDR      0(0000357)

```

```

-001- 16 #      FAILTST
-001- 17 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSEG4S1.
-001- 18 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0026767 03 000507 020017 ----- CDGNM -001- 19 #      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0026770 03 000510 000037 ----- -001- 20 #      VFD      16,WPSEG4S1

```

22 # WRITE PROTECT SEGMENT 4 ENABLE (WPSEG4) IS STUCK ACTIVE (LOW) BETWEEN BOARDS

```

-001- 25 #      COMPARE NOT
-001- 26 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000337).
-001- 27 #      IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026771 03 000511 054014 ----- CDGNM -001- 28 #      VFD      1,LINDEX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0026772 03 000512 000000 000337 -001- 29 #      ADDR      0(0000337)

```

```

-001- 31 #      FAILTST
-001- 32 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSEG5S1.
-001- 33 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0026774 03 000514 020017 ----- CDGNM -001- 34 #      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
0026775 03 000515 000040 ----- -001- 35 #      VFD      16,WPSEG5S1

```

37 # WRITE PROTECT SEGMENT 5 ENABLE (WPSEG5) IS STUCK ACTIVE (LOW) BETWEEN BOARDS

```

-001- 40 #      COMPARE NOT
-001- 41 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000277).
-001- 42 #      IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0026776 03 000516 054014 ----- CDGNM -001- 43 #      VFD      1,LINDEX 2,2 1,1 1,SUCCESS 5,0 6,NCOMPARE
0026777 03 000517 000000 000277 -001- 44 #      ADDR      0(0000277)

```

STORE WRITE PROTECT TEST

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TEST 51 SEGMENT 3

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MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP W77D

```

-001- 01 #      FAILTST
-001- 02 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSEG6S1.
-001- 03 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0027001 03 000521 020017 ----- CDGNM
0027002 03 000522 000041 -----
-001- 04 #      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
-001- 05 #      VFD      16,WPSEG6S1

07 # WRITE PROTECT SEGMENT 6 ENABLE (WPSEG6) IS STUCK ACTIVE (LOW) BETWEEN BOARDS

-001- 10 #      COMPARE NOT
-001- 11 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000177).
-001- 12 #      IF COMPARISON DOES NOT EXIST, SKIP NEXT TABLE ENTRY.
0027003 03 000523 054014 ----- CDGNM
0027004 03 000524 000000 000177
-001- 13 #      VFD      1,LINDX 2,2 1,1 1,SUCCESS      5,0 6,NCOMPARE
-001- 14 #      ADDR      0(0000177)

-001- 16 #      FAILTST
-001- 17 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS WPSEG7S1.
-001- 18 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0027006 03 000526 020017 ----- CDGNM
0027007 03 000527 000042 -----
-001- 19 #      VFD      1,0 2,1 5,0 2,0 6,NFAILTST
-001- 20 #      VFD      16,WPSEG7S1

22 # WRITE PROTECT SEGMENT 7 ENABLE (WPSEG7) IS STUCK ACTIVE (LOW) BETWEEN BOARDS

-001- 25 #      COMPARE
-001- 26 #      COMPARE ON-LINE MAINTENANCE CHANNEL BUFFER TO 0(0000000).
-001- 27 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0027010 03 000530 050014 ----- CDGNM
0027011 03 000531 000000 000000
-001- 28 #      VFD      1,LINDX 2,2 1,1 1,SUCCESS      5,0 6,NCOMPARE
-001- 29 #      ADDR      0(0000000)

-001- 31 #      FAILBIT
-001- 32 #      FAILURE EXIT. SYMBOLIC TROUBLE NUMBER IS WPENNGXX
-001- 33 #      WHERE XX IS THE LOWEST FAILING BIT NUMBER.
0027013 03 000533 020020 ----- CDGNM
0027014 03 000534 000043 -----
-001- 34 #      VFD      1,0 2,1 5,0 2, 6,NFLBITS
-001- 35 #      VFD      16,WPENNG

37 # ONE OF THE ENABLES ON A SINGLE WRITE PROTECT BIT SELECTOR GATE IS STUCK ACTIVE

```

STORE WRITE PROTECT TEST

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TEST 51 SEGMENT 4

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSHW W77D

```

-001- 01 # *****
-001- 02 # *
-001- 03 # * TEST 51 SEGMENT 4
-001- 04 # *
-001- 05 # *****

```

0027015 03 000535 000400 ----- CDGNN -001- 08 VFD 1,0 2,0 2,0 5,0(4) 6,NTTESTSEG

```

11 # THIS SEGMENT CHECKS THAT THE WRITE-COMMAND ENABLE (NOTWCD) ON THE INPUT
12 # TO THE WRITE PROTECT ERROR FF (SERB) IS NOT STUCK-AT-ONE (HIGH). THIS CAN BE
13 # FUNCTIONALLY TESTED VERY EASILY BY SETTING A WRITE PROTECT BIT TO PROTECT THE
14 # FIRST 4K BLOCK IN THE STORE UNDER TEST AND IMMEDIATELY CLEARING THE SAME BIT
15 # USING AN ADDRESS THAT IS WITHIN THE FIRST 4K. THE WRITE PROTECT COMMAND USED
16 # TO CLEAR THE BIT SHOULD FORCE THE WRITE-COMMAND ENABLE INACTIVE (LOW), SO
17 # THAT THE WRITE PROTECT ERROR IS NOT SET. IF THE CONTENTS OF THE ERROR REGISTER
18 # RETRIEVED FROM THE OFF-LINE PROCESSOR SHOW THE MY-WRITE-ERROR BIT (MWRTERR)
19 # SET, THEN THE WRITE-COMMAND ENABLE MUST BE STUCK-ACTIVE (HIGH).

```

```

-001- 22 # NO3 CODE
-001- 23 # PROCESS 3ACC CODED ROUTINE AT ADDRESS WPCKTST3.
0027016 03 000536 040043 000000 CDGNN -001- 24 VFD 1,0 2,2 7,0 6,NN03CD
0027017 03 000537 000000 027021 0027021 -001- 25 ADDR WPCKTST3

```

```

0027021 27 WPCKTST3
0027021 28 S10M MASCINT
0027021 03 000541 137020 012667 CDGSI0 -002- 29 BSA MAS10M
0027023 03 000543 046071 103401 -001- 30 DATA MASCINT
0027024 03 000544 103401 025750 -001- 31 LI R0,ZERX # INITIALIZE STORE CONTROLLER
0027026 03 000546 007400 ----- 32 LSR MCHTR,R0 # ZERO OFF-LINE ERROR REGISTER
0027027 33 LMCH LDMIRL
0027027 34 CALL SLDMIRL
0027027 03 000547 037020 111075 CSYSUB -001- 34 BSA SLDMIRL
0027027 -002- 35 BSA SLDMIRL # PROTECT FIRST 4K BLOCK
0027031 36 MTCWRIT BASADDR,ONE
0027031 03 000551 103561 106203 -001- 37 LI R7,MTCWR
0027033 03 000553 003741 000001 -001- 38 LI R14,ONE # SET UP ONE TO BE WRITTEN (SD0-15)
0027035 03 000555 003360 ----- -001- 39 ZR R15 # CLEAR HIGH BITS (SD16-23)
0027036 03 000556 031040 043140 CTS0 -001- 40 LAL R2,BASADDR,RAD
0027040 03 000560 040061 ----- -001- 41 L R3,1(RAD)
0027041 03 000561 003541 000000 -001- 42 LI R6,0 # LOAD SPECIAL PARTY
0027043 03 000563 037020 013027 CDGSHS -002- 43 BSA MEMOP
0027045 44 S10M CLRSER # CLEAR POSSIBLE NORMAL SELECT ERROR
0027045 03 000565 137020 012667 CDGSI0 -002- 45 BSA CLRSER
0027047 03 000567 043310 ----- -001- 46 DATA CLRSER # CLEAR STORE ERROR REGISTER
0027050 47 MTCWRIT BASADDR,ZERO
0027050 03 000570 103561 106203 -001- 48 LI R7,MTCWR
0027052 03 000572 003741 000000 -001- 49 LI R14,ZERO # SET UP ZERO TO BE WRITTEN (SD0-15)

```

STORE WRITE PROTECT TEST

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TEST 51 SEGMENT 4

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MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDG5WP

W77D

```

0027054 03 000574 003360 ----- -001- 01      ZR      R15          # CLEAR HIGH BITS (SD16-23)
0027055 03 000575 031040 043140 CTS# -001- 02      LAL      R2,BASADDR,RAD
0027057 03 000577 040061 ----- -001- 03      L      R3,1(RAD)
0027060 03 000600 003541 000000 ----- -001- 04      LI      R6,0          # LOAD SPECIAL PARITY
0027062 03 000602 037020 013027 CDG5BS -002- 05      BSA     MEMOP
0027064 ----- 06      SIOM    CLRSEI      # CLEAR POSSIBLE NORMAL SELECT ERROR
0027064 03 000604 137020 012667 CDG5IO -002- 07      BSA     MASIOI
0027066 03 000606 043310 103401 ----- -001- 08      DATA   CLRSEI      # CLEAR STORE ERROR REGISTER
0027067 03 000607 103401 114652 ----- 09      LI      R0,MCHBXT+E(8)+ERXF  # RETRIEVE OFF-LINE ERROR REGISTER
0027071 03 000611 007400 ----- 10      LSR     MCHTR,R0
0027072 ----- 11      LMCH    LDMIRL
0027072 03 000612 037020 111075 C$YSUB -001- 12      CALL    SLOMIRL
0027074 ----- 13      BSA     SLOMIRL
0027074 03 000614 103401 000261 ----- -001- 14      LMCH    RTNMCHB
0027076 ----- 15      LI      R0,RTNMCHB
0027076 03 000616 073027 ----- -001- 16      CALL    SMCH
0027077 ----- 17      BSAI    $XCH      # SUBROUTINE SMCH IS IN PROGRAM C$YSUB
0027077 ----- 18      RTN_TBL  **4
0027077 03 000617 171400 ----- -001- 19      GA
0027100 03 000620 031000 027104 0027104 -001- 20      LAL      R0,**4,RAD
0027102 03 000622 037000 011162 CDG5NM -001- 21      BL      INTRPN03

-001- 23 #      COMPARE
-001- 24 #      COMPARE ON-LINE MCHB BIT S(MWRTER) TO 0.
-001- 25 #      IF COMPARISON EXISTS, SKIP NEXT TABLE ENTRY.
0027104 03 000624 021314 ----- CDG5NM -001- 26      VFD     1,LPIN0X 2,1 1,0 1,SUCCESS 5,S(MWRTER) 6,NCOMPARE
0027105 03 000625 000000 ----- -001- 27      VFD     15,D 1,ZERO

-001- 29 #      FAILTST
-001- 30 #      FAILURE EXIT - SYMBOLIC TROUBLE NUMBER IS ERBENSTK.
-001- 31 #      DATA WORD IN FAILURE MESSAGE IS ON-LINE MCHB.
0027106 03 000626 020017 ----- CDG5NM -001- 32      VFD     1,0 2,1 5,0 2,0 6,NFAILTST
0027107 03 000627 000053 ----- -001- 33      VFD     16,ERBENSTK

35 # THE WRITE-COMMAND (NOTWCD) ENABLE ON WRITE PROTECT ERROR(SERB) IS STUCK-AT-ONE

-001- 36 #      NO3_CODE
-001- 39 #      PROCESS JACC CODED ROUTINE AT ADDRESS **2.
0027110 03 000630 040043 000000 CDG5NM -001- 40      VFD     1,0 2,2 7,0 6,NNO3CD
0027111 03 000631 000000 027113 0027113 -001- 41      ADDR    **2

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5WP ISSUE 05 PAGE 79

TEST 51 SEGMENT 4

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP W77D

		01	CSTWP3	OW	0(633),0(635)	# 12706	
-001-	02		NOTE		***** THE FIRST ADDRESS OVERWRITTEN IS 000633 *****		
0027113				05	FINALE	WP3INIT	
0027113	03	000633	137020	012771	CDGSI0	-002-	06
0027115	03	000635	137000	026303	0026303	-001-	07
0027117	03	000637	171400	-----		-001-	08
0027120	03	000640	037000	011725	CDGNH	-001-	09
0027120				10	EOM		
				-001-	11	NOTE	
						# TEST COMPLETED	
						# 12706	
						***** THE LAST ADDRESS OVERWRITTEN IS 000641 *****	

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 80

TEST 51 SEGMENT 4

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP

W770

01 # WPTST SUBROUTINE:

03 # DESCRIPTION:

04 # THIS ROUTINE READS SPECIFIED WRITE PROTECT REGISTER CONTENTS FROM THE
 05 # STORE UNDER TEST. IT COMPARES THE CONTENTS WITH THE PATTERN SPECIFIED AND
 06 # EXITS IMMEDIATELY IF THERE IS A MISMATCH. IF THE COMPARE(S) IS(ARE)
 07 # SUCCESSFUL, EXIT WILL BE MADE WITH MAINTENANCE CHANNEL BUFFER(MCHB) ALL ZEROS
 08 # NOTE: WRITE PROTECT PARITY LOW & HIGH ARE COMPARED WITH REG 8,BITS 7 & 15.

10 # ENTRY CONDITIONS:

11 # RB = PATTERN TO BE COMPARED AGAINST
 12 # R15 = NUMBER OF REPEATED WRITE PROTECT REGISTER FETCHES
 13 # R12/13 = ADDRESS OF FIRST WRITE PROTECT BLOCK TO BE CHECKED

15 # EXIT CONDITIONS:

16 # MCHB = MISMATCH PATTERN (BIT SET FOR EACH FAILURE, INCL PAR)

0025002			20	WPTST	CSECT		
0025002			21	BEGIN		(RA0,RA0+1)	
0025002	04	000000	172714	-----	-002- 22	HN	RA0,12
0025003	04	000001	072735	-----	-002- 23	HN	RA0+1,13
0025004	04	000002	030520	012754	24	LL	R5,MODSIZE
0025006					25	WPTSTLP	
0025006					26	MTCREAD	RA0
0025006	04	000004	103561	106263	-001- 27	LI	R7,B(1000110010110011)
0025010	04	000006	006054	-----	-001- 28	LR	R2,R12
0025011	04	000007	006075	-----	-001- 29	LR	R3,R13
0025012	04	000010	003140	-----	-001- 30	R6	
0025013	04	000011	037020	013027	-002- 31	BSA	MEMOP
0025015					32	SION	CLRSER
0025015	04	000013	137020	012667	-002- 33	BSA	MASION
0025017	04	000015	043310	-----	-001- 34	DATA	CLRSER
0025020	04	000016	112403	-----	35	UNPK	MCHB
0025021	04	000017	015070	-----	36	XR	R3,R8
0025022	04	000020	055033	-----	37	BNC	WPTSTXT
0025023	04	000021	057403	-----	38	TSRPL	MCHB
0025024	04	000022	030027	-----	39	ICF	R1,7
0025025	04	000023	057423	-----	40	TSRPH	MCHB
0025026	04	000024	030037	-----	41	ICF	R1,15
0025027	04	000025	003001	-----	43	LN	RD,1
0025030	04	000026	017030	000200	44	CRM	R1,R8,X(0080)
0025032	04	000030	055023	-----	45	BNC	WPTSTXT
0025033	04	000031	003002	-----	46	LN	RD,2
0025034	04	000032	017030	100000	47	CRM	R1,R8,X(8000)
0025036	04	000034	055017	-----	48	BNC	WPTSTXT
0025037	04	000035	006014	-----	49	LR	RD,R12

INCREMENT FOR REPEATED PASSES

FETCH WRITE PROTECT REGISTER CONTENTS

MAIN MEMORY STATUS

NO SPECIAL PARITY

CLEAR POSSIBLE NORMAL SELECT ERROR

CLEAR STORE ERROR REGISTER

SET UP MTC CHANNEL PARITY LOW

SET UP MTC CHANNEL PARITY HIGH

PARITY LOW = 1 (IF TEST FAILS)

DOES PARITY LOW = TEST PATTERN BIT 7?

PARITY HIGH = 1 (IF TEST FAILS)

SAVE UPPER STORE ADDRESS BITS

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 81

TEST 51 SEGMENT 4

0:06:56 2/06/81 ****

MAIN_STORE_WRITE_PROTECT DIAGNOSTIC TEST

CDGSWP W77D

```

0025040 04 000036 001725 ----- 01 AR R13,R5
0025041 04 000037 001725 ----- 02 AR R13,R5 # UPDATE WRITE PROTECT REG POINTER
0025042 04 000040 055010 ----- 03 BNC UPDTXT # EXIT IF NO CARRY
0025043 04 000041 004701 ----- 04 AN R12,1 # INCREMENT UPPER BITS
0025044 04 000042 030420 012756 CDGSI0 05 LL R1,STSELMSK
0025046 04 000044 014001 ----- 06 NR R0,R1 # ORIGINAL STORE SELECT BITS
0025047 04 000045 015421 ----- 07 COM R1
0025050 04 000046 014301 ----- 08 NR R12,R1 # NEW MODULE SELECT BITS
0025051 04 000047 014700 ----- 09 OR R12,R0 # OLD STORE SELECT W/ NEW MOD SELECT BITS
0025052 10 UPDTXT
0025052 04 000050 136360 025006 0025006 11 BX R15,WPTSTLP
12 # REPEAT FOR NUMBER OF WRITE PROTECT REGISTERS SPECIFIED
0025054 04 000052 003000 ----- 13 ZR R0 # IF TEST PASSES, MCHB PARITY BITS = 0

0025055 15 WPTSTXT
0025055 04 000053 112000 ----- 16 PACK MCHTR
0025056 17 MIMODE
0025056 04 000054 013400 ----- -001- 18 MI 0
0025057 19 L BR,R0
0025057 04 000055 070523 ----- -001- 20 VFD 8,BRXT 8,ROXF # LOAD BR BITS 0&1 INTO PL&PH OF MTC CHAN
0025060 21 LDPAR LDPARX
0025060 04 000056 025730 ----- -001- 22 DATA LDPARX
0025061 23 MCHTRXMCHB
0025061 04 000057 026472 ----- -001- 24 DATA MCHTRXMCHB
0025062 25 ZMINTX
0025062 04 000060 026750 ----- -001- 26 DATA ZMINTX

28 # SAVE ADDRESS USED TO ACCESS WRITE PROTECT REGISTER IN
29 # TEMPDT1 & TEMPDT2 OF PAGING BUFFER SCRATCH AREA (PAGSCR)

0025063 04 000061 035700 043112 CTSD 31 STAL R12,PAGSCR+8,RA1
0025065 04 000063 044721 ----- 32 ST R13,1(RA1) # STORE ADDRESS FOR TROUBLE PRINTOUT
0025066 33 RETURN
0025066 04 000064 072314 ----- -001- 34 GN RAO,RAO
0025067 04 000065 072335 ----- -001- 35 GN RAO+1,RAO+1
0025070 04 000066 056400 ----- -001- 36 BTSA
37 CSTWP1 MAXSIZE 0,535
38 CSTWP2 MAXSIZE 0,432
39 CSTWP3 MAXSIZE 0,642
40 WPTST MAXSIZE 0,67

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 82

PATCH HISTORY

0:06:56 2/06/81 ****

LISTING OF INDIVIDUAL PATCHES

CDGSWP W77D

*/ */ */ 012706 / */ */ */

TRNO=12706 SERNOB=47325

0025070

-002- 01 PBEGIN PROG=CDGSWP
 02 # THIS PATCH CORRECTS THE FOLLOWING PROBLEMS:
 03 # 1. INCORRECT STORE NUMBER IN FAIL MESSAGE
 04 # WHEN MORE THAN STORE 0 DEFINED
 05 # 2. TESTS WOULD NOT DIAGNOSE ANY STORE
 06 # HIGHER THAN STORE 1
 07 TCEND
 -001- 08 NOTE *****

*/ */ */ 012736 / */ */ */

TRNO=12736 SERNOB=47756

0025070

-002- 15 PBEGIN PROG=CDGSWP
 16 # THIS PATCH CORRECTS A PORTION OF TC47325 AND ALLOWS TEST 50 TO ATP
 17 TCEND
 -001- 18 NOTE *****

*/ */ */ 012988 / */ */ */

TRNO=12988 SERNOB=49898

0025070

-002- 25 PBEGIN PROG=CDGSWP
 26 # THIS PATCH BREAKS UP TEST 49 AND 50 INTO SMALLER REAL TIME SEGMENTS.
 27 TCEND
 -001- 28 NOTE *****

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 83

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

LISTING OF INDIVIDUAL PATCHES

CDGSWP

W77D

0025070

```

-001- 03 ## TBL 4901
-001- 04 ## TEST 49
-001- 05 ## SEGMENT 0, 1, OR 2
-001- 06 ## PR CDGSWP
-001- 07 #
08 # TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER TEST FAILED
09 # TO COMPLETE PROPERLY.
10 # DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
11 # ADDRESS = FAILURE EXIT(FAILTST) IN 'MASIOM' SUBROUTINE
12 #
13 # MASCH 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
14 # MASCH 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER
15 # MASCH 08-23 FC203 MAIN STORE CONTROLLER CLOCK & I/O INTERFACE

```

0025070

```

-001- 18 ## TBL 4902
-001- 19 ## TEST 49
-001- 20 ## SEGMENT 1 OR 2
-001- 21 ## PR CDGSWP
-001- 22 #
23 # WRITE PROTECT BIT 0 ( FIRST BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
24 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
25 #
26 # MASCH 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
27 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
28 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11
29 # MASCH 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
30 # MASCH 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9
31 # MASCH 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10

```

STORE WRITE PROTECT TEST

PR-1C927-50

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CDGSWP

ISSUE 05

PAGE

84

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

4903 WPSLC01

CDGSWP W770

0025070

-001- 01 ## TBL 4903
 -001- 02 ## TEST 49
 -001- 03 ## SEGMENT 1 OR 2
 -001- 04 ## PR CDGSWP
 -001- 05 #
 06 # WRITE PROTECT BIT 1 (SECOND BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 07 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 08
 09 # MASCH 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9

0025070

-001- 12 ## TBL 4904
 -001- 13 ## TEST 49
 -001- 14 ## SEGMENT 1 OR 2
 -001- 15 ## PR CDGSWP
 -001- 16 #
 17 # WRITE PROTECT BIT 2 (THIRD BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 18 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 19
 20 # MASCH 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10

0025070

-001- 23 ## TBL 4905
 -001- 24 ## TEST 49
 -001- 25 ## SEGMENT 1 OR 2
 -001- 26 ## PR CDGSWP
 -001- 27 #
 28 # WRITE PROTECT BIT 3 (FOURTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 29 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 30
 31 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 85

TROUBLE LOCATION MANUAL

D:06:56 2/06/81 ****

4906 WPSLC04

CDGSWP

W77D

0025070

-001- 01 ## TBL 4906
 -001- 02 ## TEST 49
 -001- 03 ## SEGMENT 1 OR 2
 -001- 04 ## PR CDGSWP
 -001- 05 #
 06 # WRITE PROTECT BIT 4 (FIFTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 07 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 08 #
 09 # MASCH 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
 10 # MASCH 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER

0025070

-001- 13 ## TBL 4907
 -001- 14 ## TEST 49
 -001- 15 ## SEGMENT 1 OR 2
 -001- 16 ## PR CDGSWP
 -001- 17 #
 18 # WRITE PROTECT BIT 5 (SIXTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 19 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 20 #
 21 # MASCH 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
 22 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 23 # MASCH 08-16 FA1060 MAIN STORE CONTROLLER - BITS PLBPH
 24 # MASCH 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
 25 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
 26 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A

0025070

-001- 29 ## TBL 4908
 -001- 30 ## TEST 49
 -001- 31 ## SEGMENT 1 OR 2
 -001- 32 ## PR CDGSWP
 -001- 33 #
 34 # WRITE PROTECT BIT 6 (SEVENTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 35 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 36 #
 37 # MASCH 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14

STORE WRITE PROTECT TEST

PR-1C927-50

D:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 86

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

4909 WPSLC07

CDGSWP W77D

0025070

-001- 01 #5 TBL 4909
 -001- 02 #5 TEST 49
 -001- 03 #5 SEGMENT 1 OR 2
 -001- 04 #5 PR CDGSWP
 -001- 05 #
 06 # WRITE PROTECT BIT 7 (EIGHTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 07 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 08
 09 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15

0025070

-001- 12 #5 TBL 4910
 -001- 13 #5 TEST 49
 -001- 14 #5 SEGMENT 1 OR 2
 -001- 15 #5 PR CDGSWP
 -001- 16 #
 17 # WRITE PROTECT BIT 8 (FIRST BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 18 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 19
 20 # MASCH 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8

0025070

-001- 23 #5 TBL 4911
 -001- 24 #5 TEST 49
 -001- 25 #5 SEGMENT 1 OR 2
 -001- 26 #5 PR CDGSWP
 -001- 27 #
 28 # WRITE PROTECT BIT 9 (SECOND BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 29 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 30
 31 # MASCH 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 87

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

4912 WPSLC10

CDGSWP W770

0025070

-001- 01 #8 TBL 4912
 -001- 02 #8 TEST 49
 -001- 03 #8 SEGMENT 1 OR 2
 -001- 04 #8 PR CDGSWP
 -001- 05 #
 06 # WRITE PROTECT BIT 10 (THIRD BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 07 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 08
 09 # MASCM 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 810

0025070

-001- 12 #8 TBL 4913
 -001- 13 #8 TEST 49
 -001- 14 #8 SEGMENT 1 OR 2
 -001- 15 #8 PR CDGSWP
 -001- 16 #
 17 # WRITE PROTECT BIT 11 (FOURTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 18 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 19
 20 # MASCM 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 811

0025070

-001- 23 #8 TBL 4914
 -001- 24 #8 TEST 49
 -001- 25 #8 SEGMENT 1 OR 2
 -001- 26 #8 PR CDGSWP
 -001- 27 #
 28 # WRITE PROTECT BIT 12 (FIFTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 29 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 30
 31 # MASCM 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 812

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 88

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

4915 WPSLC13

CDGSWP W77D

0025070

-001- 01 ## TBL 4915
 -001- 02 ## TEST 49
 -001- 03 ## SEGMENT 1 OR 2
 -001- 04 ## PR CDGSWP
 -001- 05 #
 06 # WRITE PROTECT BIT 13 (SIXTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 07 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 08
 09 # MASCH 08-07 FA106D MAIN STORE CONTROLLER - BITS 5 & 13

0025070

-001- 12 ## TBL 4916
 -001- 13 ## TEST 49
 -001- 14 ## SEGMENT 1 OR 2
 -001- 15 ## PR CDGSWP
 -001- 16 #
 17 # WRITE PROTECT BIT 14 (SEVENTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 18 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 19
 20 # MASCH 08-08 FA106D MAIN STORE CONTROLLER - BITS 6 & 14

0025070

-001- 23 ## TBL 4917
 -001- 24 ## TEST 49
 -001- 25 ## SEGMENT 1 OR 2
 -001- 26 ## PR CDGSWP
 -001- 27 #
 28 # WRITE PROTECT BIT 15 (EIGHTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 29 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 30
 31 # MASCH 08-09 FA106D MAIN STORE CONTROLLER - BITS 7 & 15

STORE WRITE PROTECT TEST

PR-1C927-50

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TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

4918 WPSLCPL

CDGSWP W770

0025070

-001- 01 #8 TBL 4918
 -001- 02 #8 TEST 49
 -001- 03 #8 SEGMENT 1 OR 2
 -001- 04 #8 PR CDGSWP
 -001- 05 #
 06 # WRITE PROTECT PL BIT (PARITY BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 07 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 08
 09 # MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH

0025070

-001- 12 #8 TBL 4919
 -001- 13 #8 TEST 49
 -001- 14 #8 SEGMENT 1 OR 2
 -001- 15 #8 PR CDGSWP
 -001- 16 #
 17 # WRITE PROTECT PH BIT (PARITY BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 18 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 19
 20 # MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH

0025070

-001- 23 #8 TBL 4920
 -001- 24 #8 TEST 49
 -001- 25 #8 SEGMENT 2
 -001- 26 #8 PR CDGSWP
 -001- 27 #
 28 # ONE ENTIRE WRITE PROTECT REGISTER WAS WRITTEN/READ INCORRECTLY
 29 # DATA = ADDRESS OF FIRST WRITE PROTECT BLOCK IN FAILING WRITE PROTECT REG
 30
 31 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 32 # MASCM 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 815
 33 # STORE ADDRESS BIT 15 IS ON THIS BOARD

STORE WRITE PROTECT TEST

PR-1C927-50

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TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

4921 WPIDFL

CDGSWP W77D

0025070

-001- 01 #& TBL 4921
 -001- 02 #& TEST 49
 -001- 03 #& SEGMENT 2
 -001- 04 #& PR CDGSWP
 -001- 05 #
 06 # ONE ENTIRE WRITE PROTECT REGISTER WAS WRITTEN/READ INCORRECTLY
 07 # DATA = ADDRESS OF FIRST WRITE PROTECT BLOCK IN FAILING WRITE PROTECT REG
 08 #
 09 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 10 # MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH
 11 # STORE ADDRESS BIT 16 IS ON THIS BOARD
 12 # MASCM 08-23 FC203 MAIN STORE CONTROLLER CLOCK & I/O INTERFACE
 13 # STORE ADDRESS BIT 17 IS ON THIS BOARD
 14 # MASCM 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
 15 # MASCM 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9
 16 # MASCM 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10
 17 # MASCM 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11
 18 # MASCM 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
 19 # MASCM 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
 20 # MASCM 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
 21 # MASCM 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15

0025070

-001- 24 #& TBL 5001
 -001- 25 #& TEST 50
 -001- 26 #& SEGMENT 0, 1, 2 OR 3
 -001- 27 #& PR CDGSWP
 -001- 28 #
 29 # TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER UNDER TEST FAILED
 30 # TO COMPLETE PROPERLY.
 31 # DATA = I/O ORDER WHICH WAS UNSUCCESSFULLY TRANSMITTED
 32 # ADDRESS = FAILURE EXIT(FAILTST) IN 'MASION' SUBROUTINE
 33 #
 34 # MASCM 08-20 FA1064 MAIN STORE CONTROLLER - I/O ORDER DECODER
 35 # MASCM 08-22 FA1063 MAIN STORE CONTROLLER - I/O ORDER RECEIVER
 36 # MASCM 08-23 FC203 MAIN STORE CONTROLLER CLOCK & I/O INTERFACE

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 91

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5002 WPSLC00

CDGSWP W77D

0025070

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-001- 01 ## TBL 5002
-001- 02 ## TEST 50
-001- 03 ## SEGMENT 1, 2 OR 3
-001- 04 ## PR CDGSWP
-001- 05 #
06 #   WRITE PROTECT BIT 0 ( FIRST BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
07 #   DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
08 #
09 #   MASCH 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8

-001- 12 ## TBL 5003
-001- 13 ## TEST 50
-001- 14 ## SEGMENT 1, 2 OR 3
-001- 15 ## PR CDGSWP
-001- 16 #
17 #   WRITE PROTECT BIT 1 ( SECOND BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
18 #   DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
19 #
20 #   MASCH 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9

0025070

-001- 23 ## TBL 5004
-001- 24 ## TEST 50
-001- 25 ## SEGMENT 1, 2 OR 3
-001- 26 ## PR CDGSWP
-001- 27 #
28 #   WRITE PROTECT BIT 2 ( THIRD BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
29 #   DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
30 #
31 #   MASCH 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10

0025070

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STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 92

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5005 WPSLC03

CDG5WP W77D

0025070

-001- 01 #& TBL 5005
 -001- 02 #& TEST 50
 -001- 03 #& SEGMENT 1, 2 OR 3
 -001- 04 #& PR CDG5WP
 -001- 05 #
 06 # WRITE PROTECT BIT 3 (FOURTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 07 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 08 #
 09 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 &11

0025070

-001- 12 #& TBL 5006
 -001- 13 #& TEST 50
 -001- 14 #& SEGMENT 1, 2 OR 3
 -001- 15 #& PR CDG5WP
 -001- 16 #
 17 # WRITE PROTECT BIT 4 (FIFTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 18 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 19 #
 20 # MASCH 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 &12

0025070

-001- 23 #& TBL 5007
 -001- 24 #& TEST 50
 -001- 25 #& SEGMENT 1, 2 OR 3
 -001- 26 #& PR CDG5WP
 -001- 27 #
 28 # WRITE PROTECT BIT 5 (SIXTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 29 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 30 #
 31 # MASCH 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 &13
 32 # MASCH 08-16 FA1060 MAIN STORE CONTROLLER - BITS 16 &14
 33 # MASCH 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 &14
 34 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 &15
 35 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDG5WP

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5008 WPSLC06

CDGSWP W77D

0025070

-001- 01 #% TBL 5008
 -001- 02 #% TEST 50
 -001- 03 #% SEGMENT 1, 2 OR 3
 -001- 04 #% PR CDGSWP
 -001- 05 #
 06 # WRITE PROTECT BIT 6 (SEVENTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 07 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 08
 09 # MASCH 08-08 FA106D MAIN STORE CONTROLLER - BITS 6 & 14

0025070

-001- 12 #% TBL 5009
 -001- 13 #% TEST 50
 -001- 14 #% SEGMENT 1, 2 OR 3
 -001- 15 #% PR CDGSWP
 -001- 16 #
 17 # WRITE PROTECT BIT 7 (EIGHTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 18 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 19
 20 # MASCH 08-09 FA106D MAIN STORE CONTROLLER - BITS 7 & 15

0025070

-001- 23 #% TBL 5010
 -001- 24 #% TEST 50
 -001- 25 #% SEGMENT 1, 2 OR 3
 -001- 26 #% PR CDGSWP
 -001- 27 #
 28 # WRITE PROTECT BIT 8 (FIRST BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 29 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 30
 31 # MASCH 08-02 FA106D MAIN STORE CONTROLLER - BITS 0 & 8

STORE WRITE PROTECT TEST

PR-1C927-50

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TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5011 WPSLC09

CDGSWP W77D

0025070

-001- 01 #& TBL 5011
 -001- 02 #& TEST 50
 -001- 03 #& SEGMENT 1, 2 OR 3
 -001- 04 #& PR CDGSWP
 -001- 05 #
 06 # WRITE PROTECT BIT 9 (SECOND BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 07 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 08 #
 09 # MASCM 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9

0025070

-001- 12 #& TBL 5012
 -001- 13 #& TEST 50
 -001- 14 #& SEGMENT 1, 2 OR 3
 -001- 15 #& PR CDGSWP
 -001- 16 #
 17 # WRITE PROTECT BIT 10 (THIRD BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 18 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 19 #
 20 # MASCM 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10

0025070

-001- 23 #& TBL 5013
 -001- 24 #& TEST 50
 -001- 25 #& SEGMENT 1, 2 OR 3
 -001- 26 #& PR CDGSWP
 -001- 27 #
 28 # WRITE PROTECT BIT 11 (FOURTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 29 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 30 #
 31 # MASCM 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 95

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5014 WPSLC12

CDGSWP W77D

-001- 01 #8 TBL 5014
 -001- 02 #8 TEST 50
 -001- 03 #8 SEGMENT 1, 2 OR 3
 -001- 04 #8 PR CDGSWP
 -001- 05 #
 06 # WRITE PROTECT BIT 12 (FIFTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 07 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 08
 09 # MASCH 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
 0025070

-001- 12 #8 TBL 5015
 -001- 13 #8 TEST 50
 -001- 14 #8 SEGMENT 1, 2 OR 3
 -001- 15 #8 PR CDGSWP
 -001- 16 #
 17 # WRITE PROTECT BIT 13 (SIXTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 18 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 19
 20 # MASCH 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
 0025070

-001- 23 #8 TBL 5016
 -001- 24 #8 TEST 50
 -001- 25 #8 SEGMENT 1, 2 OR 3
 -001- 26 #8 PR CDGSWP
 -001- 27 #
 28 # WRITE PROTECT BIT 14 (SEVENTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 29 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 30
 31 # MASCH 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
 0025070

STORE WRITE PROTECT TEST

PR-1C927-50

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0:06:56 2/06/81 ****

5017 WPSLC15

CDGSHW

W770

0025070

-001- 01 ## TBL 5017
 -001- 02 ## TEST 50
 -001- 03 ## SEGMENT 1, 2 OR 3
 -001- 04 ## PR CDGSHW
 -001- 05 #
 06 # WRITE PROTECT BIT 15 (EIGHTH BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 07 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 08 #
 09 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15

0025070

-001- 12 ## TBL 5018
 -001- 13 ## TEST 50
 -001- 14 ## SEGMENT 1, 2 OR 3
 -001- 15 ## PR CDGSHW
 -001- 16 #
 17 # WRITE PROTECT PL BIT (PARITY BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 18 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 19 #
 20 # MASCH 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH

0025070

-001- 23 ## TBL 5019
 -001- 24 ## TEST 50
 -001- 25 ## SEGMENT 1, 2 OR 3
 -001- 26 ## PR CDGSHW
 -001- 27 #
 28 # WRITE PROTECT PH BIT (PARITY BIT-SLICED BOARD) WILL NOT CLEAR AND/OR SET.
 29 # DATA = ADDRESS USED TO ACCESS WRITE PROTECT REGISTER WHEN FAILURE OCCURRED.
 30 #
 31 # MASCH 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSHW ISSUE 05 PAGE 97

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5020 WPTFL

CDGSMW W770

0025070

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-001- 01 #8 TBL 5020
-001- 02 #8 TEST 50
-001- 03 #8 SEGMENT 2
-001- 04 #8 PR CDGSMW
-001- 05 #
06 # ENABLE FROM MAIN SHIFTER WHICH ALLOWS WRITE PROTECT REGISTER(S) TO BE
07 # WRITTEN IS STUCK ACTIVE IN THE BACKPLANE
08 #
09 # MASCH 08-18 FA1071 MAIN STORE CONTROLLER - TIMING GENERATOR
10 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
11 # MASCH 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
12 # MASCH 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9
13 # MASCH 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10
14 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11
15 # MASCH 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
16 # MASCH 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
17 # MASCH 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
18 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
19 # MASCH 08-16 FA1060 MAIN STORE CONTROLLER - BITS PL&PH

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0025070

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-001- 22 #8 TBL 5101
-001- 23 #8 TEST 51
-001- 24 #8 SEGMENT 0, 1, 2, 3 OR 4
-001- 25 #8 PR CDGSMW
-001- 26 #
27 # TWO SUCCESSIVE I/O TRANSMISSIONS TO THE STORE CONTROLLER
28 # UNDER TEST FAILED TO COMPLETE PROPERLY.
29 # ADDR(LEFT) = ADDRESS OF FAILURE EXIT IN 'MASION' SUBROUTINE
30 # DATA(LEFT) = I/O MESSAGE AS IT WAS TRANSMITTED FROM CC
31 # DATA(RIGHT) = I/O MESSAGE AS IT WAS RECEIVED FROM CC
32 #
33 # MASCH 08-20 FA1044 MAIN STORE CONTROLLER - I/O ORDER DECODER
34 # MASCH 08-22 FA1043 MAIN STORE CONTROLLER - I/O ORDER RECEIVER
35 # MASCH 08-23 FC203 MAIN STORE CONTROLLER CLOCK & I/O INTERFACE

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STORE WRITE PROTECT TEST

PR-1C927-50

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TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5102 WPCKSTK1

CDGSWP W770

0029070

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-001- 01 #8 TBL 5102
-001- 02 #8 TEST 51
-001- 03 #8 SEGMENT 1
-001- 04 #8 PR CDGSWP
-001- 05 #
06 # THE CONSTANT WRITE PROTECT ERROR IMPLIES THAT THE IN-WRITE-PROTECT SIGNAL
07 # (TINWP) IS STUCK ACTIVE (LOW) ON THE NET AMONG BIT-SLICE BOARDS & TIMING PACK.
08 #
09 # MASCM 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
10 # MASCM 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9
11 # MASCM 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10
12 # MASCM 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11
13 # MASCM 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
14 # MASCM 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
15 # MASCM 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
16 # MASCM 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
17 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
18 # SINCE STORE ERROR 'B' (SERB) CANNOT BE ISOLATED FROM HIGHER
19 # STORES, THE LAST CIRCUIT PACK LISTED ABOVE MIGHT BE FAULTY
20 # IN ANY, REPEAT ANY, OF THE EQUIPPED STORE CONTROLLERS.

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0025070

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-001- 23 #8 TBL 5103
-001- 24 #8 TEST 51
-001- 25 #8 SEGMENT 1
-001- 26 #8 PR CDGSWP
-001- 27 #
28 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/B610) ON THE
29 # FIRST BIT-SLICED BOARD HAS ITS WRITE PROTECT BIT INPUT STUCK ACTIVE (HIGH).
30 #
31 # MASCM 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
32 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
33 # SINCE STORE ERROR 'B' (SERB) CANNOT BE ISOLATED FROM HIGHER
34 # STORES, THE LAST CIRCUIT PACK LISTED ABOVE MIGHT BE FAULTY
35 # IN ANY, REPEAT ANY, OF THE EQUIPPED STORE CONTROLLERS.
36 # PROC 02-23 FA1046 DOUBLE STORE READ

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STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 99

TROUBLE LOCATION MANUAL

0106156 2/06/81 ****

5104 WPS1BS01

CDGSWP W770

0025070

-001- 01 #& TBL 5104
 -001- 02 #& TEST 51
 -001- 03 #& SEGMENT 1
 -001- 04 #& PR CDGSWP
 -001- 05 #
 06 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) ON THE
 07 # SECOND BIT-SLICED BOARD HAS ITS WRITE PROTECT BIT INPUT STUCK ACTIVE (HIGH).
 08
 09 # MASCH 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9

0025070

-001- 12 #& TBL 5105
 -001- 13 #& TEST 51
 -001- 14 #& SEGMENT 1
 -001- 15 #& PR CDGSWP
 -001- 16 #
 17 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) ON THE
 18 # THIRD BIT-SLICED BOARD HAS ITS WRITE PROTECT BIT INPUT STUCK ACTIVE (HIGH).
 19
 20 # MASCH 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10

0025070

-001- 23 #& TBL 5106
 -001- 24 #& TEST 51
 -001- 25 #& SEGMENT 1
 -001- 26 #& PR CDGSWP
 -001- 27 #
 28 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) ON THE
 29 # FOURTH BIT-SLICED BOARD HAS ITS WRITE PROTECT BIT INPUT STUCK ACTIVE (HIGH).
 30
 31 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11

STORE WRITE PROTECT TEST

PR-1C927-50

0106156 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 100

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 *****

5107 WPS18S04

CDGSWP W770

0025070

-001- 01 #8 TBL 5107
 -001- 02 #8 TEST 51
 -001- 03 #8 SEGMENT 1
 -001- 04 #8 PR CDGSWP
 -001- 05 #
 06 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) ON THE
 07 # FIFTH BIT-SLICED BOARD HAS ITS WRITE PROTECT BIT INPUT STUCK ACTIVE (HIGH).
 08
 09 # MASCM 05-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12

0025070

-001- 12 #8 TBL 5108
 -001- 13 #8 TEST 51
 -001- 14 #8 SEGMENT 1
 -001- 15 #8 PR CDGSWP
 -001- 16 #
 17 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) ON THE
 18 # SIXTH BIT-SLICED BOARD HAS ITS WRITE PROTECT BIT INPUT STUCK ACTIVE (HIGH).
 19
 20 # MASCM 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13

0025070

-001- 23 #8 TBL 5109
 -001- 24 #8 TEST 51
 -001- 25 #8 SEGMENT 1
 -001- 26 #8 PR CDGSWP
 -001- 27 #
 28 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) ON THE
 29 # SEVENTH BIT-SLICED BOARD HAS ITS WRITE PROTECT BIT INPUT STUCK ACTIVE (HIGH).
 30
 31 # MASCM 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 101

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5110 WPS1BS07

CDGSWP

W77D

0025070

-001- 01 #& TBL 5110
 -001- 02 #& TEST 51
 -001- 03 #& SEGMENT 1
 -001- 04 #& PR CDGSWP
 -001- 05 #

06 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) ON THE
 07 # EIGHTH BIT-SLICED BOARD HAS ITS WRITE PROTECT BIT INPUT STUCK ACTIVE (HIGH).
 08 #
 09 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15

0025070

-001- 12 #& TBL 5111
 -001- 13 #& TEST 51
 -001- 14 #& SEGMENT 2
 -001- 15 #& PR CDGSWP
 -001- 16 #

17 # STORE ADDRESS BIT 15(SA15) IS STUCK-AT-ZERO IN THE MODULE-SELECT CIRCUITRY
 18 #
 19 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 20 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
 21 # PROC 02-23 FA1046 DOUBLE STORE READ

0025070

-001- 24 #& TBL 5112
 -001- 25 #& TEST 51
 -001- 26 #& SEGMENT 2
 -001- 27 #& PR CDGSWP
 -001- 28 #

29 # STORE ADDRESS BIT 12 (SA12) IS STUCK-AT-ZERO IN WRITE PROTECT SELECT CKT.
 30 #
 31 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 32 # MASCH 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
 33 # STORE ADDRESS BIT 12 (SA12)

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 102

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5113 WPB12SA1

CDG5WP W77D

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-001- 01 #8 TBL 5113
-001- 02 #8 TEST 51
-001- 03 #8 SEGMENT 2
-001- 04 #8 PR CDG5WP
-001- 05 #
06 # STORE ADDRESS BIT 12 (SA12) IS STUCK-AT-ONE IN WRITE PROTECT SELECT CKT.
07 #
08 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
09 # MASCM 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
10 # STORE ADDRESS BIT 12 (SA12)

-001- 13 #8 TBL 5114
-001- 14 #8 TEST 51
-001- 15 #8 SEGMENT 2
-001- 16 #8 PR CDG5WP
-001- 17 #
18 # STORE ADDRESS BIT 13 (SA13) IS STUCK-AT-ZERO IN WRITE PROTECT SELECT CKT.
19 #
20 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
21 # MASCM 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
22 # STORE ADDRESS BIT 13 (SA13)

-001- 25 #8 TBL 5115
-001- 26 #8 TEST 51
-001- 27 #8 SEGMENT 2
-001- 28 #8 PR CDG5WP
-001- 29 #
30 # STORE ADDRESS BIT 13 (SA13) IS STUCK-AT-ONE IN WRITE PROTECT SELECT CKT.
31 #
32 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
33 # MASCM 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
34 # STORE ADDRESS BIT 13 (SA13)
35 # MASCM 03-33 JK3 MAIN STORE FAOUT BOARD FOR MODULE 1
36 # MODTIMO GATES MODULE ENABLE (MENB0) ON FAOUT BOARD

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STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5WP ISSUE 05 PAGE 103

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5116 WPB14SA0

CDGSWP

W77D

0025070

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-001- 01 #B TBL 5116
-001- 02 #B TEST 51
-001- 03 #B SEGMENT 2
-001- 04 #B PR CDGSWP
-001- 05 #
06 # STORE ADDRESS BIT 14 (SA14) IS STUCK-AT-ZERO IN WRITE PROTECT SELECT CKT.
07 #
08 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
09 # MASCH 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
10 # STORE ADDRESS BIT 14 (SA14)

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0025070

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-001- 13 #B TBL 5117
-001- 14 #B TEST 51
-001- 15 #B SEGMENT 2
-001- 16 #B PR CDGSWP
-001- 17 #
18 # STORE ADDRESS BIT 14 (SA14) IS STUCK-AT-ONE IN WRITE PROTECT SELECT CKT.
19 #
20 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
21 # MASCH 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
22 # STORE ADDRESS BIT 14 (SA14)

```

0025070

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-001- 25 #B TBL 5118
-001- 26 #B TEST 51
-001- 27 #B SEGMENT 2
-001- 28 #B PR CDGSWP
-001- 29 #
30 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFMPX-AG10/BG10) ON THE
31 # FIRST BIT-SLICED BOARD EITHER HAS AN INPUT STUCK-AT-ZERO (LOW) OR
32 # ITS OUTPUT STUCK-AT-ZERO (HIGH).
33 #
34 # MASCH 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
35 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
36 # MASCH 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL
37 # MASCH 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9
38 # MASCH 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10
39 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11
40 # MASCH 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 104

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5119 WPS0BS01

CDGSWP

W77D

0025070

-001- 01 #8 TBL 5119
 -001- 02 #8 TEST 51
 -001- 03 #8 SEGMENT 2
 -001- 04 #8 PR CDGSWP
 -001- 05 #
 06 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) ON THE
 07 # SECOND BIT-SLICED BOARD EITHER HAS AN INPUT STUCK-AT-ZERO (LOW) OR
 08 # ITS OUTPUT STUCK-AT-ZERO (HIGH).
 09 #
 10 # MASCH 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9
 11 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A

0025070

-001- 14 #8 TBL 5120
 -001- 15 #8 TEST 51
 -001- 16 #8 SEGMENT 2
 -001- 17 #8 PR CDGSWP
 -001- 18 #
 19 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) ON THE
 20 # THIRD BIT-SLICED BOARD EITHER HAS AN INPUT STUCK-AT-ZERO (LOW) OR
 21 # ITS OUTPUT STUCK-AT-ZERO (HIGH).
 22 #
 23 # MASCH 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10
 24 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A

0025070

-001- 27 #8 TBL 5121
 -001- 28 #8 TEST 51
 -001- 29 #8 SEGMENT 2
 -001- 30 #8 PR CDGSWP
 -001- 31 #
 32 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) ON THE
 33 # FOURTH BIT-SLICED BOARD EITHER HAS AN INPUT STUCK-AT-ZERO (LOW) OR
 34 # ITS OUTPUT STUCK-AT-ZERO (HIGH).
 35 #
 36 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11
 37 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 105

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5122 WPS0BS04

CDGSWP

W770

0025070

-001- 01 #S TBL 5122
 -001- 02 #S TEST 51
 -001- 03 #S SEGMENT 2
 -001- 04 #S PR CDGSWP
 -001- 05 #
 06 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFMPX-AG10/BG10) ON THE
 07 # FIFTH BIT-SLICED BOARD EITHER HAS AN INPUT STUCK-AT-ZERO (LOW) OR
 08 # ITS OUTPUT STUCK-AT-ZERO (HIGH).
 09 #
 10 # MASCH 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
 11 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A

0025070

-001- 14 #S TBL 5123
 -001- 15 #S TEST 51
 -001- 16 #S SEGMENT 2
 -001- 17 #S PR CDGSWP
 -001- 18 #
 19 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFMPX-AG10/BG10) ON THE
 20 # SIXTH BIT-SLICED BOARD EITHER HAS AN INPUT STUCK-AT-ZERO (LOW) OR
 21 # ITS OUTPUT STUCK-AT-ZERO (HIGH).
 22 #
 23 # MASCH 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
 24 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 25 # MASCH 08-24 FA1068 MAIN STORE CONTROLLER - BUS CONTROL
 26 # MASCH 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
 27 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
 28 # NOTE--1 MASCH 08-11 FA1060 MAIN STORE CONTROLLER - BITS 17&21
 29 # NOTE--1 MASCH 08-10 FA1060 MAIN STORE CONTROLLER - BITS 16&20

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 106

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5124 WPS0BS06

CDGSWP W77D

-001- 01 #8 TBL 5124
 -001- 02 #8 TEST 51
 -001- 03 #8 SEGMENT 2
 -001- 04 #8 PR CDGSWP
 -001- 05 #

06 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) ON THE
 07 # SEVENTH BIT-SLICE BOARD EITHER HAS AN INPUT STUCK-AT-ZERO (LOW) OR
 08 # ITS OUTPUT STUCK-AT-ZERO (HIGH).

0025070

09 #
 10 # MASCM 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
 11 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A

-001- 14 #8 TBL 5125
 -001- 15 #8 TEST 51
 -001- 16 #8 SEGMENT 2
 -001- 17 #8 PR CDGSWP
 -001- 18 #

19 # ONE OF THE WRITE PROTECT BIT SELECTOR GATES (FFWPX-AG10/BG10) ON THE
 20 # EIGHTH BIT-SLICE BOARD EITHER HAS AN INPUT STUCK-AT-ZERO (LOW) OR
 21 # ITS OUTPUT STUCK-AT-ZERO (HIGH).

0025070

22 #
 23 # MASCM 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
 24 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A

-001- 27 #8 TBL 5126
 -001- 28 #8 TEST 51
 -001- 29 #8 SEGMENT 3
 -001- 30 #8 PR CDGSWP
 -001- 31 #

32 # ONE OF THE MODULE SELECT ENABLES (MSELX) IS STUCK ACTIVE (LOW) BETWEEN
 33 # THE DECODER CIRCUITRY AND THE BIT-SLICE BOARDS.

0025070

34 #
 35 # MASCM 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECOER
 36 # MASCM 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8
 37 # MASCM 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9
 38 # MASCM 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10
 39 # MASCM 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11
 40 # MASCM 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12
 41 # MASCM 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13
 42 # MASCM 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14
 43 # MASCM 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15
 44 # MASCM 08-16 FA1060 MAIN STORE CONTROLLER - BITS 16 & 18

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRA0E SECRET - SEE TRA0E SECRET RESTRICTIVE NOTICE ON COVER SHEET COGSWP ISSUE 05 PAGE 107

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5127 WPSEG0S1

CDGSWP

W770

0025070

-001- 01 ## TBL 5127
 -001- 02 ## TEST 51
 -001- 03 ## SEGMENT 3
 -001- 04 ## PR CDGSWP
 -001- 05 #
 06 # A WRITE PROTECT SEGMENT 0 ENABLE (WPSEG0) IS STUCK ACTIVE (LOW) BETWEEN
 07 # ITS DECODER CIRCUITRY AND BIT-SLICED BOARD 0.
 08 #
 09 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 10 # MASCM 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8

0025070

-001- 13 ## TBL 5128
 -001- 14 ## TEST 51
 -001- 15 ## SEGMENT 3
 -001- 16 ## PR CDGSWP
 -001- 17 #
 18 # A WRITE PROTECT SEGMENT 1 ENABLE (WPSEG1) IS STUCK ACTIVE (LOW) BETWEEN
 19 # ITS DECODER CIRCUITRY AND BIT-SLICED BOARD 1.
 20 #
 21 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 22 # MASCM 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9

0025070

-001- 25 ## TBL 5129
 -001- 26 ## TEST 51
 -001- 27 ## SEGMENT 3
 -001- 28 ## PR CDGSWP
 -001- 29 #
 30 # A WRITE PROTECT SEGMENT 2 ENABLE (WPSEG2) IS STUCK ACTIVE (LOW) BETWEEN
 31 # ITS DECODER CIRCUITRY AND BIT-SLICED BOARD 2.
 32 #
 33 # MASCM 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 34 # MASCM 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 108

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5130 WPSEG3S1

CDGSWP W77D

0025070

-001- 01 #8 TBL 5130
 -001- 02 #8 TEST 51
 -001- 03 #8 SEGMENT 3
 -001- 04 #8 PR CDGSWP
 -001- 05 #
 06 # A WRITE PROTECT SEGMENT 3 ENABLE (WPSEG3) IS STUCK ACTIVE (LOW) BETWEEN
 07 # ITS DECODER CIRCUITRY AND BIT-SLICED BOARD 3.
 08
 09 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 10 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 &11

0025070

-001- 13 #8 TBL 5131
 -001- 14 #8 TEST 51
 -001- 15 #8 SEGMENT 3
 -001- 16 #8 PR CDGSWP
 -001- 17 #
 18 # A WRITE PROTECT SEGMENT 4 ENABLE (WPSEG4) IS STUCK ACTIVE (LOW) BETWEEN
 19 # ITS DECODER CIRCUITRY AND BIT-SLICED BOARD 4.
 20
 21 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 22 # MASCH 08-05 FA1060 MAIN STORE CONTROLLER - BITS 4 &12

0025070

-001- 25 #8 TBL 5132
 -001- 26 #8 TEST 51
 -001- 27 #8 SEGMENT 3
 -001- 28 #8 PR CDGSWP
 -001- 29 #
 30 # A WRITE PROTECT SEGMENT 5 ENABLE (WPSEG5) IS STUCK ACTIVE (LOW) BETWEEN
 31 # ITS DECODER CIRCUITRY AND BIT-SLICED BOARD 5.
 32
 33 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 34 # MASCH 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 &13

STORE WRITE PROTECT TEST

PR-1C927-50

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TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5133 WPSEG6S1

CDGSWP W77D

0025070

-001- 01 #& TBL 5133
 -001- 02 #& TEST 51
 -001- 03 #& SEGMENT 3
 -001- 04 #& PR CDGSWP
 -001- 05 #
 06 # A WRITE PROTECT SEGMENT 6 ENABLE (WPSEG6) IS STUCK ACTIVE (LOW) BETWEEN
 07 # ITS DECODER CIRCUITRY AND BIT-SLICED BOARD 6.
 08 #
 09 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 10 # MASCH 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14

0025070

-001- 13 #& TBL 5134
 -001- 14 #& TEST 51
 -001- 15 #& SEGMENT 3
 -001- 16 #& PR CDGSWP
 -001- 17 #
 18 # A WRITE PROTECT SEGMENT 7 ENABLE (WPSEG7) IS STUCK ACTIVE (LOW) BETWEEN
 19 # ITS DECODER CIRCUITRY AND BIT-SLICED BOARD 7.
 20 #
 21 # MASCH 08-17 FA1062 MAIN STORE CONTROLLER - CHECK CIRCUIT A
 22 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15

0025070

-001- 25 #& TBL 5135
 -001- 26 #& TEST 51
 -001- 27 #& SEGMENT 3
 -001- 28 #& PR CDGSWP
 -001- 29 #
 30 # ONE OF THE ENABLES ON A WRITE PROTECT BIT SELECTOR GATE ON THE FIRST
 31 # BIT-SLICED BOARD IS STUCK ACTIVE.
 32 #
 33 # MASCH 08-02 FA1060 MAIN STORE CONTROLLER - BITS 0 & 8

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 110

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5136 WPENNG01

CDGSWP W77D

-001- 01 # TBL 5136
 -001- 02 # TEST 51
 -001- 03 # SEGMENT 3
 -001- 04 # PR CDGSWP
 -001- 05 #
 06 # ONE OF THE ENABLES ON A WRITE PROTECT BIT SELECTOR GATE ON THE SECOND
 07 # BIT-SLICED BOARD IS STUCK ACTIVE.
 08
 09 # MASCM 08-03 FA1060 MAIN STORE CONTROLLER - BITS 1 & 9

0025070

-001- 12 # TBL 5137
 -001- 13 # TEST 51
 -001- 14 # SEGMENT 3
 -001- 15 # PR CDGSWP
 -001- 16 #
 17 # ONE OF THE ENABLES ON A WRITE PROTECT BIT SELECTOR GATE ON THE THIRD
 18 # BIT-SLICED BOARD IS STUCK ACTIVE.
 19
 20 # MASCM 08-04 FA1060 MAIN STORE CONTROLLER - BITS 2 & 10

0025070

-001- 23 # TBL 5138
 -001- 24 # TEST 51
 -001- 25 # SEGMENT 3
 -001- 26 # PR CDGSWP
 -001- 27 #
 28 # ONE OF THE ENABLES ON A WRITE PROTECT BIT SELECTOR GATE ON THE FOURTH
 29 # BIT-SLICED BOARD IS STUCK ACTIVE.
 30
 31 # MASCM 08-05 FA1060 MAIN STORE CONTROLLER - BITS 3 & 11

0025070

STORE WRITE PROTECT TEST

PR-1C927-50

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TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5139 WPENNG04

CDGSMW

W77D

0025070

-001- 01 #8 TBL 5139
-001- 02 #8 TEST 51
-001- 03 #8 SEGMENT 3
-001- 04 #8 PR CDGSMW
-001- 05 #
06 # ONE OF THE ENABLES ON A WRITE PROTECT BIT SELECTOR GATE ON THE FIFTH
07 # BIT-SLICED BOARD IS STUCK ACTIVE.
08
09 # MASCH 08-06 FA1060 MAIN STORE CONTROLLER - BITS 4 & 12

0025070

-001- 12 #8 TBL 5140
-001- 13 #8 TEST 51
-001- 14 #8 SEGMENT 3
-001- 15 #8 PR CDGSMW
-001- 16 #
17 # ONE OF THE ENABLES ON A WRITE PROTECT BIT SELECTOR GATE ON THE SIXTH
18 # BIT-SLICED BOARD IS STUCK ACTIVE.
19
20 # MASCH 08-07 FA1060 MAIN STORE CONTROLLER - BITS 5 & 13

0025070

-001- 23 #8 TBL 5141
-001- 24 #8 TEST 51
-001- 25 #8 SEGMENT 3
-001- 26 #8 PR CDGSMW
-001- 27 #
28 # ONE OF THE ENABLES ON A WRITE PROTECT BIT SELECTOR GATE ON THE SEVENTH
29 # BIT-SLICED BOARD IS STUCK ACTIVE.
30
31 # MASCH 08-08 FA1060 MAIN STORE CONTROLLER - BITS 6 & 14

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSMW ISSUE 05 PAGE 112

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

5142 WPENNG07

CDGSWP

W77D

0025070

-001- 01 #8 TBL 5142
 -001- 02 #8 TEST 51
 -001- 03 #8 SEGMENT 3
 -001- 04 #8 PR CDGSWP
 -001- 05 #
 06 # ONE OF THE ENABLES ON A WRITE PROTECT BIT SELECTOR GATE ON THE EIGHTH
 07 # BIT-SLICED BOARD IS STUCK ACTIVE.
 08
 09 # MASCH 08-09 FA1060 MAIN STORE CONTROLLER - BITS 7 & 15

0025070

0025070

-001- 12 #8 TBL 5143
 -001- 13 #8 TEST 51
 -001- 14 #8 SEGMENT 4
 -001- 15 #8 PR CDGSWP
 -001- 16 #
 17 # THE WRITE-COMMAND ENABLE (NOTWCO) ENABLE ON THE INPUT OF THE WRITE PROTECT
 18 # ERROR FF (SERB) IS STUCK-AT-ONE (HIGH).
 19
 20 # MASCH 08-21 FA1065 MAIN STORE CONTROLLER - COMMAND DECODER
 21 END

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 113

CDGSWP W77D

[illegible]

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 114

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSWP	W77D
'PAGSCR+30'	T	BASADDR		W=4 S=0 N=36 CL=2 26-34, 28-33, 33-31, 34-36, 37-24, 45-40, 49-38, 54-37, 63-30, 64-42, 66-39, 68-05, 72-38, 74-10, 78-40, 79-02		
0	U	BBX		1-08		
0	U	BF				
4	R	BITPTR	22-09	63-32, 64-29, 64-31, 64-32, 64-34, 66-37, 67-04, 67-38, 67-43, 67-44, 72-36, 73-08, 73-09, 73-42, 73-46, 74-02, 74-03		
0000000	A	BIT0		16-05		
0000001	A	BIT1		16-06		
0000012	A	BIT10		16-15		
0000013	A	BIT11		16-16		
0000014	A	BIT12		16-17		
0000015	A	BIT13		16-18		
0000016	A	BIT14		16-19		
0000017	A	BIT15		16-20		
0000020	A	BIT16		16-21		
0000021	A	BIT17		16-22		
0000022	A	BIT18		16-23		
0000023	A	BIT19		16-24		
0000002	A	BIT2		16-07		
0000003	A	BIT3		16-08		
0000004	A	BIT4		16-09		
0000005	A	BIT5		16-10		
0000006	A	BIT6		16-11		
0000007	A	BIT7		16-12		
0000010	A	BIT8		16-13		
0000011	A	BIT9		16-14		
06 0025114	L	BKCSWP1		24-39 40-07		
06 0025651	L	BKCSWP2		43-39 58-07		
06 0026303	L	BKCSWP3		61-39 80-07		
2	R	BLKMSK		7-15		
0000161	A	BRXT		LIBNUM=15 82-20		
0047214	A	BUSCHK	18-08			
'CHECK BUS I						
SOLUTION USE						
NG SER'	17	R CC		W=1 S=14 N=0 CL=1 LIBNUM=15		
'SER+0'	10	T CHNDF	7-04	W=1 S=2 N=0 CL=2		
'CIBUF+0'	10	T CHNDBX		W=1 S=0 N=0 CL=2		
'CIBUF+0'	T	CINIT		W=1 S=2 N=0 CL=2		
'CIBUF+0'	T	CKHLT		W=1 S=1 N=0 CL=2		
'CIBUF+0'	T	CKSTP	18-10			
0040374	A	CKTINIT				
'INITIALIZE						
ALL STORE CO						
NTRROLLER CIR						
CUITS'	T	CKTINITT				
0046074	A	CLKSTOP	18-15	50-07		
'DISABLE STO						
RE CONTROLLE						

STORE WRITE PROTECT TEST

PR-1c927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 115

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
R CLOCK OUTP				
UT'	T	CLKSTOPT		
0046070	A	CLKSTRT	18-17	50-37
'ENABLE STOR				
E CONTROLLER				
CLOCK OUTPU				
T'	T	CLKSTRTT		
0177771	A	CLOCKON	22-01	
0043310	A	CLRSER	18-13	29-02, 33-46, 35-06, 37-36, 46-06, 50-04, 50-18, 50-30, 55-03, 55-15, 64-10, 67-10, 67-19, 73-15, 73-26, 78-46, 79-08, 81-34
'CLEAR STORE				
ERROR REGIS				
TER'	T	CLRSERT		
'CLRSER'	T	COMENT		

CDGSWP

W77D

```

4.<(+18
!$*)
~
~X>?
ifg'=" ab
cdefghi n<+
f jklmnopqr
n)z="stuvw
xyz+{[p=012
3456789+{]d
-(abdefghi
)jklmno
pqr \ s
tuvxyz
0123456789
'n T CONLC LIBNUM=7

```

```

z
e<hplix
v$fgs
~al
ix>k
jo#b'd" ab
cdefghi n<+
f jklmnopqr

```

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP

ISSUE 05 PAGE 116

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE T NAME DEF/REF ATTRIBUTES AND REFERENCES

COGSWP

W77D

W)Z=--STUVW
 XYZ=+L[P=012
 3456789+J]#
 -ABCDEFGHI
 JKLKNO
 PQR
 TUVWXYZ
 0123456789

	T	CONSC	LIBNUM=7
CDGSI0	V	CONTREP	6-25 24-38, 43-38, 61-38
'DGRELO+0'	T	CONTROLBITS	M=7 S=11 N=0 CL=2
0000053	A	COUNT	23-11 LIBNUM=16 41-11, 59-11, 84-01, 84-03, 84-18, 85-01, 85-12, 85-23, 86-01, 86-13, 86-29, 87-01, 87-12, 87-23, 88-01, 88-12, 88-23, 89-01, 89-12, 89-23, 90-01, 90-12, 90-23, 91-01, 91-22, 91-24, 92-01, 92-12, 92-23, 93-01, 93-12, 93-23, 94-01, 94-12, 94-23, 95-01, 95-12, 95-23, 96-01, 96-12, 96-23, 97-01, 97-12, 97-23, 98-01, 98-20, 98-22, 99-01, 99-23, 100-01, 100-12, 100-23, 101-01, 101-12, 101-23, 102-01, 102-12, 102-24, 103-01, 103-13, 103-23, 104-01, 104-13, 104-25, 105-01, 105-14, 105-27, 106-01, 106-14, 107-01, 107-14, 107-27, 108-01, 108-13, 108-25, 109-01, 109-13, 109-25, 110-01, 110-13, 110-25, 111-01, 111-12, 111-23, 112-01, 112-12, 112-23, 113-01, 113-12
0111432	L	CPATCH	2-21
0112562	L	CPATCH1	2-22 31-22, 34-15, 37-42, 46-29, 51-06
0114107	L	CPATCH2	2-23
0115073	L	CPATCH3	2-24
0121236	L	CPATCH7	2-25
06 0025071	L	CSTMP1	2-13 23-11
06 0025626	L	CSTMP2	2-14 41-11
06 0026260	L	CSTMP3	2-15 59-11
'CHKWRD+0'	T	CTRLCK	M=1 S=16 N=0 CL=2
0000000	A	DATAD	23-11 41-11, 59-11

6.<(+18
 {S#})
 ~-/
 ,X>?
 :#0'="'
 + n<(+
 W)Z=--
 XYZ=+L[P=012
 3456789+J]#
 -ABCDEFGHI
 JKLKNO
 PQR
 TUVWXYZ
 0123456789

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET COGSWP ISSUE 05 PAGE 117

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSWP	W77D
'						
	T	DELLC		LIGNUM=7		
	O	DF				
CTSD	W	DGNLIM	6-12			
CTSD	V	DGREQ	6-37			
'SER+O'	T	DHPR	W=1 S=11 N=0 CL=2			
06 0025235	L	DIRFAL	29-17 29-09, 29-11, 29-13			
'SER+O'	T	DLPR	W=1 S=15 N=0 CL=2			
06 0025455	L	DRFAIL	35-22 35-14, 35-16, 35-18			
'#	P					
ROC 02-23						
FA1046	DOUB					
LE STORE REA						
O'						
	T	DSR		LIGNUM=13		
	O	UF				
0000252	A	ERXF	113-12	LIGNUM=15 64-14, 67-23, 73-30, 79-09		
0000053	A	ERBENSTK	79-33, 113-12			
0146074	A	ERCOLL	18-19			
'COLLECT ERR						
ORS IN STORE						
ERROR REG'	T	ERCOLLT				
10 R	ERSAVE		7-21			
O	J	ESS2	1-10			
1	J	ESS2E	1-09			
CYSUB	V	EXCOFLPG	6-28			
0145454	A	EXERLD	18-21			
'ENABLE EXTE						
RNAL LOAD OF						
STORE ERROR						
REG'	T	EXERLDT				
0145454	A	EXLDB15	18-24			
'ENABLE EXTE						
RNAL LOAD OF						
STORE ERROR						
REG W/ ERRO						
R COLLECT OP						
TION'	T	EXLDB15T				
CDGNOP	V	FAILOFF	3-41			
0010000	A	FAK10	21-36			
0005440	A	FASTREF	18-26			
'PERFORM FAS						
T REFRESH ON						
STORE'	T	FASTREFT				
0045454	A	FASTRNC	18-28			
'FORCE FAST						
REFRESH W/O						
CLOCK'	T	FASTRNCT				
O	FB					
0146074	A	FBIT09	18-32			
0146064	A	FBIT09R	18-35			

STORE WRITE PROTECT TEST

PR-1C927-50

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TROUBLE LOCATION MANUAL

0106:56 2/06/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
'COLLECT ERR ORS IN SER W / REFRESH ON'	T	FBITD9RT		
'COLLECT ERR ORS IN STORE ERROR REGIS TER'	T	FBITD9T		
0146076	A	FBRMB15	18-37	
'FANOUT BOAR D REFRESH W/ ERROR COLLE CT'	T	FBRMB15T		
'CIOBUF+0'	T	FBDT9		W=1 S=17 N=0 CL=2
0020000	A	FBUSRDW	21-38	
0046314	A	FCHKBT	18-39	
0046304	A	FCHKBTR	18-41	
'ACTIVATE SH IFTER CHECK BIT W/ REFRE SH ENABLED'	T	FCHKBTRY		
'ACTIVATE MA IN SHIFTER C HECK BIT'	T	FCHKBTY		
0040574	A	FCHKOS	18-43	
'FORCE ZEROS TO MODULE S ELECT XOR CH ECK & WRITE PROTECT SELE CT XOR CHECK CIRCUITS'	T	FCHKOST		
0041274	A	FCHK1S	18-46	
'FORCE ONES TO MODULE S ELECT XOR CH ECK & WRITE PROTECT SELE CT XOR CHECK CIRCUITS'	T	FCHK1ST		
0140574	A	FCKOS1S	18-49	
'FORCE ZEROS TO CHECK CK TS W/ ERROR COLLECT'	T	FCKOS1ST		
0141274	A	FCK1S1S	19-02	
'FORCE ONES TO CHECK CK TS W/ ERROR COLLECT'	T	FCK1S1ST		

CDGSWP

W77D

STORE WRITE PROTECT TEST

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
		O U FD		
0043074	A	FDISIDLE	19-04	
'FORCE DISAB				
LE OF IDLE F				
LOP'				
	T	FDISIDLET		
		O U FE		
		O U FF		
0000002	A	FFOBRM	21-44	
0145454	A	FFRMB15	18-30	
'FORCE FAST				
REFRESH & BI				
T 15'				
	T	FFRMB15T		
0020016	A	FGLDNCFR	22-02	
		1 J FIELD	1-09	
CDG610	V	FINAL	6-24	40-06, 58-06, 80-06
0046156	A	FLSHO	19-06	
0046154	A	FLSHONC	19-09	
'PRESENT ZER				
O TO INPUT O				
F MAIN SHIFT				
ER'	T	FLSHONCT		
'START ZERO				
INTO MAIN SH				
IFTER'	T	FLSHOT		
		0044474 A FNOTIM	19-16	
		0044470 A FNOTINC	19-19	45-37, 63-46
'BLOCK TIMIN				
G TO FANOUT				
BOARDS(W/CLO				
CK)'	T	FNOTIMCT		
'INHIBIT TIM				
ING SIGNALS				
TO FANOUT BO				
ARDS'	T	FNOTINT		
		0045434 A FNOWRT	19-12	
		0045430 A FNOWRTC	19-14	
'FORCE WRITI				
NG OF ONES W				
/ CLOCK RUNN				
ING'	T	FNOWRTCT		
'FORCE WRITI				
NG OF ALL-ON				
ES DATA'	T	FNOWRTT		
		10 R FOBNT	7-05	
		0041550 A FOBNT	19-21	
'FANOUT BOAR				
D MAINTENANC				
E TEST'	T	FOBMTT		
	V	FOBNDX	6-17	

CDG6SWP

W77D

STORE WRITE PROTECT TEST

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CDG6SWP

ISSUE 05

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
'PAGSCR+26'	T	FOBNUM		W=20 S=0 N=32 CL=2
'SER+0'	T	FOBPAPER		W=1 S=10 N=0 CL=2
'SER+0'	T	FOBTERRA		W=1 S=7 N=0 CL=2
'SER+0'	T	FOBTERRB		W=1 S=0 N=0 CL=2
0000004	A	FOUR	16-25	
0041474	A	FRFSELD	19-23	
'CANCEL SELE				
CT FROM FOB0				
DURING REFR				
ESH'				
0042334	T	FRFSELOT	19-25	
'CANCEL SELE				
CT FROM FOB1				
DURING REFR				
ESH'				
0042534	T	FRFSEL1T	19-27	
'CANCEL SELE				
CT FROM FOB2				
DURING REFR				
ESH'				
0043234	T	FRFSEL2T	19-29	
'CANCEL SELE				
CT FROM FOB3				
DURING REFR				
ESH'				
0043434	T	FRFSEL3T	19-31	
'CANCEL SELE				
CT FROM FOB4				
DURING REFR				
ESH'				
0044354	T	FRFSEL4T	19-33	
'CANCEL SELE				
CT FROM FOB5				
DURING REFR				
ESH'				
0044554	T	FRFSEL5T	19-35	
'CANCEL SELE				
CT FROM FOB6				
DURING REFR				
ESH'				
0045254	T	FRFSEL6T	19-37	
'CANCEL SELE				
CT FROM FOB7				
DURING REFR				
ESH'				
0044334	T	FRFSEL7T	19-39	
'SET REFRESH				
REQUEST ON				
TIMING BOARD				

CDGSWP

W77D

STORE WRITE PROTECT TEST

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
(FA1071)	T	FRREQAT		
0040674	A	FRREQB	19-42	
0040664	A	FRREQBR	19-45	
'SET REFRESH				
REQUEST ON				
FA1062 W/ RE				
FRESH ENABLE				
D'	T	FRREQBRT		
'SET REFRESH				
REQ COPY ON				
CHECK BOARD				
A (FA1062)	T	FRREQBT	21-41	
0100000	A	FSBITOP		
'CIOBUF+D'	T	FSEL		W=1 S=16 N=0 CL=2
0046074	A	FSELA	19-47	
'FORCE STORE				
SELECT(1SOL				
ATE) SIGNAL				
ON FA1071	T	FSELAT		
0004714	A	FSELB	20-02	
0004710	A	FSELBC	20-05	
'FORCE DUPLI				
CATED STORE				
SELECT(SSELB)				
W/ CLOCK'	T	FSELBCT		
'FORCE DUPLI				
CATED STORE				
SELECT(SSELB)				
ACTIVE'	T	FSELBT		
0046516	A	FSTFBRM	20-07	
'FORCE CONTR				
OLLER & FANO				
UT BOARDS TO				
REFRESH'	T	FSTFBRMT		
0042354	A	FSTNM	20-09	
0052354	A	FSTNMFR	20-11	
'FORCE NORMA				
L MODE IN CO				
NTROLLER & R				
EFRESH TO FA				
NOUT BOARDS'	T	FSTNMFR		
0042344	A	FSTNMR	20-13	
'FORCE MODE				
TO NORMAL W/				
REFRESH ENA				
bled'	T	FSTNMRT		
'FORCE MODE				
FLOP TO NORM				
AL STATE'	T	FSTNMT		

CDGSWP

W77D

STORE WRITE PROTECT TEST

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
DD46514	A	FSTRM	20-15	
'FORCE MODE FLOP TO REFR ESH STATE' T FSTRMT DD46234 A FTINHP 20-17				
'FORCE IN-WR ITE-PROTECT T FTINMPT INHIBIT T FXORG W=1 S=17 N=0 CL=2 'CHKWRD+D' T FXORG O U F0 O U F7				
0000004	A	HALTCLK	21-46	50-18, 50-30
1	R	HIPATBAK	7-13	
		HIPATBAKXT	7-14	IS A SYNONYM OF R1XT
'ILLEGAL CON DITIONAL IN THE IF MACRO' T IFERROR1 'DATA > 0 OR 'DATA < 0 IS MEANINGLESS , USE DATA ~ ' 0' T IFERROR2 'TWO CONSTAN TS ARE BEING COMPARED IN IF MACRO' T IFERROR3 'AN ITEM WAS COMPARED TO SOMETHING 0 THER THAN A CONSTANT' T IFERROR4 'DESTINATION OF AN = STA TEMENT IS A CONSTANT' T IFERROR5 'ATTEMPTING TO SET ITEM = TO SOMETHI NG OTHER THA N A CONSTANT' T IFERROR6 'ITEM MAY ON LY USE THE = AND ~ COND ITIONALS' T IFERROR7				
06 0025323	L	INDIRF	32-03	31-11, 31-13, 31-15
06 0025365	L	INDRFAIL	38-24	37-16, 37-18, 37-20
CSYSUB	V	INIT OCC	6-29	
0000001	A	INITBIT	21-42	
CSYSUB	V	INITOST	6-30	

STORE WRITE PROTECT TEST

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSWP	W77D
CSYSUB	V	INSYNC	6-31			
COGNM	X	INTRPNO3	3-38	24-45, 26-43, 29-21, 31-41, 32-07, 35-26, 38-15, 38-28, 43-45, 47-04, 51-38, 55-45, 61-45, 65-05, 68-21, 74-26, 79-21		
'PAGSCR+25'	T	IOADDR		W=20 S=0 N=31 CL=2 28-37		
'I8'	T	IOBRK				
0006220	A	IOGO	20-19			
'ENABLE ON-L						
INE I/O ACCE						
SS TO OFF-LI						
NE STORE'	T	IOGOT				
0000001	A	IOPTTYR	84-03	91-24, 98-22		
0125252	A	IOSTTA	20-21			
'I/O TEST PA						
TTERN #1'	T	IOSTAT	20-23			
0052525	A	IOST5				
'I/O TEST PA						
TTERN #2'	T	IOSTST5				
'CHKWRD+0'	T	ISOBTS	20-25	W=7 S=0 N=0 CL=2		
0067214	A	ISOCHK				
'ISOLATE FRO						
M FAR STORES						
& VERIFY VI						
A SER'	T	ISOCHKT	20-29			
0027214	A	ISOCHKU				
'APPLY ONES						
TO STORE DAT						
A BUS(W/O IS						
OLATE)'	T	ISOCHKUT	21-40			
0040000	A	ISOLATE	20-31			
0043454	A	KILL12				
'CLEAR SHIFT						
ER BIT IN PO						
SITION 12'	T	KILL12T				
'CIOBUF+0'	T	LDFF		W=1 S=15 N=0 CL=2		
0025730	A	LDPARX		LIBNUM=15 82-22		
0020000	A	LOADCHK	21-39			
'PAGSCR'	T	LONAM_BASADD				
		R				
'SER'	T	LONAM_CHDIF				
'CIOBUF'	T	LONAM_CINIT				
'CIOBUF'	T	LONAM_CKHLT				
'CIOBUF'	T	LONAM_CKSTP				
'DGREQLO'	T	LONAM_CONTRO				
		LBITS				
'CHKWRD'	T	LONAM_CTRLCK				
'SER'	T	LONAM_DHPER				
'SER'	T	LONAM_DLPER				
'CIOBUF'	T	LONAM_FBT09				
'PAGSCR'	T	LONAM_FOBNUM				

STORE WRITE PROTECT TEST

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSWP	W77D
'SER'	T	LONAH_FOBPAR				
		ER				
'SER'	T	LONAH_FOBTER				
		A				
'SER'	T	LONAH_FOBTER				
		B				
'CIOBUF'	T	LONAH_FSEL				
'CHKWRD'	T	LONAH_FXORG				
'PAGSCR'	T	LONAH_TOADDR				
'CHKWRD'	T	LONAH_SOBTS				
'CIOBUF'	T	LONAH_LDFG				
'PAGSCR'	T	LONAH_LOOPSU				
		B				
'SER'	T	LONAH_MODER				
'SER'	T	LONAH_MPXER				
'MASCIOSC'	T	LONAH_MSSC0				
'MASCIOSC'	T	LONAH_MSSC1				
'MASCIOSC'	T	LONAH_MSSC2				
'MASCIOSC'	T	LONAH_MSSC3				
'STRSTAT'	T	LONAH_PASBT				
'STRSTAT'	T	LONAH_PHBK				
'STRSTAT'	T	LONAH_PLBCK				
'SER'	T	LONAH_PHER				
'CIOBUF'	T	LONAH_REFT				
'SER'	T	LONAH_RSELER				
'RSLCHK'	T	LONAH_RSEL06				
'RSLCHK'	T	LONAH_RSEL7				
'CHKWRD'	T	LONAH_RSVD0				
'RSLCHK'	T	LONAH_RSVD1				
'RSLCHK'	T	LONAH_SAPHP				
'RSLCHK'	T	LONAH_SA17LP				
'SER'	T	LONAH_SCHER				
'CHKWRD'	T	LONAH_SDPCK				
'SER'	T	LONAH_SHER				
'STRSTAT'	T	LONAH_SNGBTE				
		R				
'DGREQLO'	T	LONAH_SPARE				
'CIOBUF'	T	LONAH_STORDE				
		R				
'RSLCHK'	T	LONAH_STRSLP				
'SER'	T	LONAH_TBER				
'PAGSCR'	T	LONAH_TINSAY				
'DGREQLO'	T	LONAH_TSTNUM				
'PAGSCR'	T	LONAH_UPADDR				
'CHKWRD'	T	LONAH_WDISOL				
'MASCIOSC'	T	LONAH_OSSC0				
'MASCIOSC'	T	LONAH_OSSC1				
'MASCIOSC'	T	LONAH_OSSC2				
'MASCIOSC'	T	LONAH_OSSC3				

STORE WRITE PROTECT TEST

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
'STRSTAT'	T	LONAM_OWDSTR		
		O		
'CIOBUF'	T	LONAM_O10TM		
'CHKVRD'	T	LONAM_ZEPCK		
CDGWM	V	LOOPIND	6-09	24-34, 24-35, 24-37, 24-37, 24-39, 24-39, 43-34, 43-35, 43-37, 43-37, 43-39, 43-39, 61-34, 61-35, 61-37, 61-37, 61-39, 61-39
'PAGSCR+24'	T	LOOPSUB		
0000000	A	LINDEX	26-45	W=20 S=0 N=30 CL=2 26-48, 27-11, 27-14, 27-26, 27-29, 29-23, 29-26, 29-38, 29-41, 30-03, 30-06, 30-18, 30-21, 32-09, 32-12, 32-24, 32-27, 32-39, 32-42, 33-05, 33-08, 35-28, 35-31, 35-43, 35-46, 36-10, 36-13, 36-25, 36-28, 38-30, 38-33, 38-45, 38-48, 39-11, 39-14, 39-26, 39-29, 47-06, 47-09, 47-21, 47-24, 47-36, 47-39, 51-40, 51-43, 52-10, 52-13, 52-25, 52-28, 52-40, 52-43, 56-01, 56-04, 56-16, 56-19, 56-31, 56-34, 65-07, 65-10, 65-22, 65-25, 68-23, 68-26, 68-38, 68-41, 69-04, 69-07, 69-19, 69-22, 69-34, 69-37, 70-04, 70-07, 70-19, 70-22, 70-34, 70-37, 74-28, 74-31, 74-45, 74-46, 75-10, 75-13, 75-25, 75-28, 75-40, 75-43, 76-10, 76-13, 76-25, 76-28, 76-40, 76-43, 77-10, 77-13, 77-25, 77-28, 79-23, 79-26
	A	R LSTPAT	7-17	
TTYTBL	X	MXAS	24-28	24-28, 43-28, 61-28
'#	M			
ASCM 08-24				
FA1068 MAIN				
STORE CONTR				
OLLER - BUS				
CONTROL'	T	MASCBSCS		LIBNUM=13
'#	M			
ASCM 08-02				
FA1060 MAIN				
STORE CONTR				
OLLER - BITS				
0 & 8'	T	MASCB50		LIBNUM=13
'#	M			
ASCM 08-03				
FA1060 MAIN				
STORE CONTR				
OLLER - BITS				
1 & 9'	T	MASCB51		LIBNUM=13
'# NOTE--1	M			
ASCM 08-11				
FA1060 MAIN				
STORE CONTR				
OLLER - BITS				
17821'	T	MASCB510		LIBNUM=13
'#	M			
ASCM 08-04				
FA1060 MAIN				
STORE CONTR				
OLLER - BITS				
2 & 10'	T	MASCB52		LIBNUM=13
'#	M			
ASCM 08-05				

STORE WRITE PROTECT TEST

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSWP	W770
FA1060 MAIN STORE CONTR OLLER - BITS 3 811'						
'#	M					
ASCM 08-06 FA1060 MAIN STORE CONTR OLLER - BITS 4 812'						
'#	M					
ASCM 08-07 FA1060 MAIN STORE CONTR OLLER - BITS 5 813'						
'#	M					
ASCM 08-08 FA1060 MAIN STORE CONTR OLLER - BITS 6 814'						
'#	M					
ASCM 08-09 FA1060 MAIN STORE CONTR OLLER - BITS 7 815'						
'#	M					
ASCM 08-10 FA1060 MAIN STORE CONTR OLLER - BITS PL&PH'						
'#	M					
ASCM 08-11 FA1060 MAIN STORE CONTR OLLER - BITS 16820'						
'#	M					
ASCM 08-12 FA1062 MAIN STORE CONTR OLLER - CHEC K CIRCUIT A'						
'#	M					
ASCM 08-23 FC203 MAIN						

STORE WRITE PROTECT TEST

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSMP	W77D
STORE CONTR						
OLLER CLOCK						
& I/O INTERF						
ACE'						
'#	M					
ASCH 08-21						
FA1065 MAIN						
STORE CONTR						
OLLER - COHN						
AND DECODER'	T	MASCCOMD		LIBNUM=13		
0046071 A	MASCINT		20-33	24-41, 26-32, 28-40, 43-41, 45-34, 49-37, 54-36, 61-41, 63-37, 66-44, 72-48, 78-30		
'INITIALIZE						
STORE CONTR						
LLER'						
MASACS	V	MASCIOSC		6-04		
0046076 A	MASCLK			20-37		
0046074 A	MASCLKN			20-40		
'FAKE SECOND						
HALF OF STO						
RE CLOCK CYC						
LE'						
'FAKE FIRST						
HALF OF STOR						
E CLOCK CYCL						
E'						
'#	M					
ASCH 08-22						
FA1063 MAIN						
STORE CONTR						
OLLER - I/O						
ORDER RECEIV						
ER'						
'#	M					
ASCH 08-20						
FA1064 MAIN						
STORE CONTR						
OLLER - I/O						
ORDER DECODE						
R'						
'#	M					
ASCH 08-18						
FA1071 MAIN						
STORE CONTR						
OLLER - TIM						
ING GENERATO						
R'						
CTSD	T	MASCTIM		LIBNUM=13		
'#	M					
ASCH 03-33						

STORE WRITE PROTECT TEST

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TROUBLE LOCATION MANUAL

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
JK3	MAIN			
STORE FANOU				
T BOARD FOR				
MODULE 1	T	MASFOB1		LIBNUM=13
CDGSIO	X	MASIOH	6-19	24-40, 26-31, 28-39, 29-01, 33-45, 35-05, 37-35, 43-40, 45-33, 45-36, 46-05, 49-36, 50-03, 50-06, 50-17, 50-29, 50-36, 54-35, 55-02, 55-14, 61-40, 63-36, 63-45, 64-09, 66-43, 67-09, 67-18, 72-47, 73-14, 73-25, 78-29, 78-42, 79-07, 81-33
MASACS	V	MASONOFF	6-39	LIBNUM=15
3 R	MCHB			29-07, 29-10, 29-12, 31-09, 31-12, 31-14, 35-12, 35-15, 35-17, 37-14, 37-17, 37-19, 55-16, 55-19, 55-22, 64-26, 65-01, 67-35, 68-17, 73-43, 74-22, 81-35, 81-38, 81-40
0000231	A	MCHBXF		LIBNUM=15
0000231	A	MCHBXT		LIBNUM=15
0	R	MCHTR		LIBNUM=15
0026472	A	MCHTRXMCHBX		LIBNUM=15
CDGSIO	V	MDSLSMSK	6-20	63-39, 64-15, 66-46, 67-24, 73-01, 73-31, 78-32, 79-10, 82-16
14	P	MEMADDR	7-25	82-24
14	R	MEMADDRD	7-23	
15	R	MEMADDRT	7-24	
CDGSBS	V	MEMOP	6-14	28-48, 33-43, 35-03, 37-33, 46-03, 50-01, 50-15, 50-27, 54-49, 55-12, 64-07, 67-07, 67-16, 73-12, 73-23, 78-43, 79-05, 81-31
CDGSBS	V	MEMOPI	6-15	

t- C 18
 . [s+]
 - /
 , R
 - 1#0' = " ab
 cdefghi n s c
 t jklmnopqr
 x' z w - stuvw
 xyz + (3 * 0 12
 3456789 + 1234
 - (ABCDEFGHI
 J K L M N O
 P Q R \ S
 T U V W X Y Z
 0123456789

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
1	T	MICODETR		LIBNUM=15
7 R	MNRNDX		7-20	
'SEP+0'	T	MODER		W=1 S=5 N=0 CL=2
CDGSIO	V	MODSIZE	6-21	30-37, 33-48, 36-44, 46-08, 50-39, 55-26, 81-24
0000000	A	MOD0	16-27	
0000001	A	MOD1	16-28	
0000002	A	MOD2	16-29	

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 129

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDG5WP	W77D
0000003	A	MOD3		16-30		
0000004	A	MOD4		16-31		
0000005	A	MOD5		16-32		
0000006	A	MOD6		16-33		
0000007	A	MOD7		16-34		
'SER+0'	T	MPXER		W=1 S=1 N=0 CL=2		
0000215	A	MSXT		LIBNUM=15 24-20, 43-20, 61-20		
0006071	A	MSCITNS		20-35		
'INITIALIZE						
STORE CONTR						
LLER W/O FOR						
CE SELECT'	T	MSCITNST				
0000032	A	MSLXSA1		107-27 74-36, 107-27		
0000013	A	MSL15SA0		102-12 68-33, 102-12		
'MASCIOSC+0'	T	MSSC0		W=20 S=0 N=0 CL=2		
'MASCIOSC+2'	T	MSSC1		W=20 S=0 N=2 CL=2		
'MASCIOSC+4'	T	MSSC2		W=20 S=0 N=4 CL=2		
'MASCIOSC+6'	T	MSSC3		W=20 S=0 N=6 CL=2		
0106263	A	NTCAD		17-24		
0106203	A	NTCAD		17-26 28-42, 33-37, 34-46, 37-27, 49-44, 50-09, 54-43, 67-03, 73-07, 78-37, 78-48		
12	R	MWRTER		W=1 S=13 N=0 CL=1 LIBNUM=15 64-27, 67-36, 73-44, 79-26		
CDGNM	V	NABT		3-31		
CDGNM	V	NADD_OFF		3-22		
CDGNM	V	NADMIC		3-23		
CDGNM	V	NBEGIN		3-28		
CDGNM	V	NBGN		3-39 23-14, 41-14, 59-14		
CDGNM	V	NCLRMS		3-33		
CDGNM	V	NCOMPARE		3-26 26-48, 27-14, 27-29, 29-26, 29-41, 30-06, 30-21, 32-12, 32-27, 32-42, 33-08, 35-31, 35-46, 36-13, 36-28, 38-33, 38-48, 39-14, 39-29, 47-09, 47-24, 47-39, 51-43, 52-13, 52-26, 52-43, 56-04, 56-19, 56-34, 65-10, 65-25, 68-26, 68-41, 69-07, 69-22, 69-37, 70-07, 70-22, 70-37, 74-31, 74-46, 75-13, 75-28, 75-43, 76-13, 76-28, 76-43, 77-13, 77-28, 79-26		
CDGNM	V	NDISABA		3-07		
CDGNM	V	NDISABB		3-08		
CDGNM	V	NEXECUTE		3-25		
CDGNM	V	NFAILTST		3-16 27-20, 27-35, 29-32, 30-12, 30-27, 32-18, 32-48, 33-14, 35-37, 36-19, 36-34, 38-39, 39-20, 39-33, 47-30, 47-45, 52-04, 52-34, 53-04, 56-25, 56-40, 65-16, 68-32, 68-47, 69-13, 69-28, 69-43, 70-13, 70-28, 74-37, 75-04, 75-19, 75-34, 76-04, 76-19, 76-34, 77-04, 77-19, 79-32,		
CDGNM	V	NFLDITS		3-37 27-05, 29-47, 32-33, 36-04, 39-05, 47-15, 52-19, 56-10, 65-31, 70-43, 77-34		
CDGNM	V	NFRZ		3-27		
CDGNM	V	NLDWIR		3-24		
CDGNM	V	NLP_END		3-29		
CDGNM	V	NNA5K		3-18		
CDGNM	V	NMICRO		3-02 24-19, 43-19, 61-19		
0106260	A	NMLRD		17-28		
0106200	A	NMLWR		17-30 67-14, 73-21		
CDGNM	V	NNO3CD		3-34 24-24, 26-24, 28-27, 33-23, 39-42, 43-24, 45-28, 49-31, 54-30, 57-03, 61-24, 63-26, 66-33, 72-32, 76-24, 79-40		
0113432	L	N0BREAk		51-17 51-14		

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDG5WP ISSUE 05 PAGE 130

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSMW	W77D
CDGNN		V NOSTPMES	6-10			
CDGNN		V NPASSTST	3-19			
CDGNN		V NPROS	3-14			
CDGNN		V NRDMICRO	3-32			
CDGNN		V NRESCLK	3-12			
CDGNN		V NRETRN	3-03			
CDGNN		V NRTNBLM	3-45	24-08, 43-08, 61-08		
0006074		A NSELA	19-49			
'RESET STORE						
SELECT(ISOL						
ATE) SIGNAL						
ON FA1071		T NSELAT				
CDGNN		V NSEND	3-20			
CDGNN		V NSKIP	3-30			
CDGNN		V NSTOP	3-06			
CDGNN		V NSTPCLK	3-10			
CDGNN		V NSTRT	3-05			
CDGNN		V NSTRTCLK	3-09			
CDGNN		V NTESTSEG	3-15	26-08, 28-08, 45-08, 49-08, 54-08, 63-08, 66-08, 72-08, 78-08		
CDGNN		V NTGCLK	3-11			
CDGNN		V NTMTST	3-35			
CDGNN		V NTTY	3-17			
0000000		A NUM	22-11	40-14, 58-14		
CDGNN		V NWDST	3-46			
		5 R NXTPAT	7-18			
CDGNN		V NZERO_EN	3-13			
CDGNN		V NZERPT	3-36			
CDGNN		V NZRETRN	3-04			
CDGNN		V NZSEND	3-21	24-13, 43-13, 61-13		
0000200		A OFLNCHNK	16-37			
0007760		A OFLNDONE	16-38			
0000001		A ONE	16-35	78-38		
0177777		A ONES	16-36	28-43, 29-03, 33-38, 37-09, 37-28, 45-45, 45-46, 49-45, 54-44		

```

f.<(AON
  XS*);
-5/
  x.>?
  :#0'L" ab
cdefghi n<+
+ jklmnopqr"
  x:=~stuvv
xyz~L[3#012
3456789+~j]#

```

STORE WRITE PROTECT TEST

PR-1c927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSMW ISSUE 05 PAGE 131

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSWP	W77D
--ICBCLF6GHI						
JJKLMNO						
PQR \ S						
LLWLYZ						
0123456789						
T OPTR						
0001036	A	ORG_000001	24-02	43-02, 61-02		
0000711	A	ORG_000111	46-25			
0000536	A	ORG_000223	31-18			
0000757	A	ORG_000247	51-01			
0000567	A	ORG_000324	34-10			
0001027	A	ORG_000423	58-02			
0000623	A	ORG_000465	37-38			
0000647	A	ORG_000526	40-02			
0000540	A	ORG_000626	31-26			
0001246	A	ORG_000633	34-21	80-02		
0000625	A	ORG_000640	38-02			
0000761	A	ORG_000645	51-12			
0000713	A	ORG_000716	46-35			
16	R	OVLOF				
CTSD	V	PAGSCR	6-36	W=1 S=0 N=0 CL=1 LIBNUM=15 24-29, 26-34, 28-33, 28-37, 33-31, 34-36, 37-24, 43-29, 45-40, 49-38, 54-37, 61-29, 63-30, 64-42, 66-39, 68-05, 72-38, 74-10, 78-40, 79-02, 82-31		
0000002	A	PARITY	24-10	43-10, 61-10		
10	R	PARSLT	7-22			
3	R	PASST	15-08	W=1 S=6 N=0 CL=1		
CDGN0F	V	PASSOFF	3-40			
CDGNH	V	PASSTST	6-11	40-09, 58-09, 80-09		
16	P	PATADDR	7-26			
0	R	PATBAK	7-12			
6	R	PATNOX	7-19			
0000025	A	PH	LIBNUM=15	27-29, 30-21, 33-08, 36-28, 39-29, 47-39, 52-43, 56-34		
3	R	PHBAK	15-04	W=1 S=1 N=0 CL=1		
0000024	A	PL	LIBNUM=15	27-14, 30-06, 32-42, 36-13, 39-14, 47-24, 52-28, 56-19		
3	R	PLBAK	15-03	W=1 S=0 N=0 CL=1		
'CDGSWP'	T	PNAME				
0000020	A	PRHOLD	16-45	35-02, 50-14, 50-23		
0000005	A	PRHOL1	16-46			
0000012	A	PRH1L0	16-47			
0000017	A	PRH1L1	16-48			
CBLM	V	PRTHASER	6-06			
0000002	A	PRW0H1L0	16-49			
0000007	A	PRW0H1L1	17-01			
0000010	A	PRW1H0L0	17-02			
0000015	A	PRW1H0L1	17-03			
'SER+0'	T	PWER				
11	R	RANGE	7-07	W=1 S=12 N=0 CL=2		
14	P	RAO	LIBNUM=3	7-25, 24-44, 26-42, 29-20, 31-40, 32-06, 35-25, 38-14, 38-27, 43-44, 47-03, 51-37, 55-44, 61-44, 65-04, 68-20, 74-25, 78-40, 78-41, 79-02, 79-03, 79-27, 81-22, 81-23, 82-34, 82-35		

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 132

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE	T NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSWP	W77D
16	P RAI		LIBNUM=3 7-26, 26-34, 26-35, 28-33, 28-34, 33-31, 33-32, 34-36, 34-41, 37-24, 37-25, 45-40, 45-41, 49-38, 49-39, 54-37, 54-38, 63-30, 63-31, 66-39, 66-40, 72-38, 72-39, 82-31, 82-32		
0047410	A ROAD	20-42			
0047414	A ROADNC	20-45			
'GATE STORE					
ADDRESS BITS					
TO STORE DA					
TA BUS'	T ROADNCT				
'GATE STORE					
ADDRESS BUS(					
SA0-16, PL)	T				
O STORE DATA					
BUS(S00-15,					
PL, PH) W/ CL					
OCK'	T ROADT				
'CIOBUW+0'	T REFST		W=1 S=3 N=0 CL=2		
0006070	A REFSTOP	20-47			
'INHIBIT REF					
RESHING OF S					
TOR'	T REFSTOPT				
0006060	A REFSTRT	20-49			
'RESUME REGU					
LAR REFRESHI					
NG OF STORE'	T REFSTRTT	22-10	63-33, 64-29, 65-01, 66-38, 67-38, 68-13, 68-15, 68-16, 68-17, 72-37, 73-46, 74-18, 74-20, 74-21, 74-22		
5	R RESULT				
0046060	A RFWISOL	21-02			
'RESUME REGU					
LAR REFRESH					
W/ STORE ISO					
LATED'	T RFWISOLT				
CSYSUB	V RGCHKADR	6-32			
'BASE ADDE					
SS OF STORE/					
MOD UNDER TE					
ST'	T RMK_BASADDR				
'ERROR INDI					
CATED BY STO					
RE COMMAND C					
HECKER'	T RMK_CHDIF				
'MAIN STORE					
CONTROLLER					
INITIALIZATI					
ON'	T RMK_CINIT				
'CONTROLLER					
CLOCK HALT'	T RMK_CKHLT				
'CONTROLLER					
CLOCK STEP'	T RMK_CKSTP				

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 133

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
"	T	RMK_CONTROLB		
"		ITS		
"		RESULT OF		
"		STORE CONTR		
"		L LEADS ISOL		
"	T	RMK_CTALCK		
"		ERROR IN P		
"		ARITY OVER H		
"		IGH DATA BIT		
"	T	RMK_DHPER		
"		ERROR IN P		
"		ARITY OVER L		
"		OW DATA BITS	T RMK_OLPER	
"		FORCE BIT		
"		15 ACTIVE IN		
"		MAIN SHIFTE		
"	T	RMK_FBD09		
"		NUMBER OF		
"		MEMORY MODUL		
"		ES (OR FANOU		
"		T BOARD(S) IN		
"		STORE CURRE		
"		NTLY UNDER T		
"	T	RMK_FOBNUM		
"		EST		
"		PARITY ERR		
"		OR DETECTED		
"		IN ADDRESS R		
"		EACHING FANO		
"	T	RMK_FOBPARER		
"		UT BOARD(S)		
"		STORE TIMI		
"		NG ERROR FRO		
"		M SELECTED F		
"	T	RMK_FOBTERA		
"		STORE TIMI		
"		NG ERROR FRO		
"		M UNSELECTED		
"	T	RMK_FOBTERB		
"		FOB		
"		STORE SELE		
"		CT FORCE ON		
"		TIMING BOARD		
"	T	RMK_FSEL		
"		I/O ORDER		
"		CHECKER EXCL		
"		USIVE-OR RES		
"	T	RMK_FXORG		
"		I/O SUBCHA		
"		NNEL ADDRESS		
"		FOR CURRENT		
"		STORE CONTR		

CDGSWP

W770

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSWP ISSUE 05 PAGE 134

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
OLLER'	T	RMK_IADDR		
' SDO-6, SDB-				
14 ISOLATE T				
EST RESULTS'	T	RMK_ISOBT5		
' ORDER CHEC				
KER EXCLUSIV				
E-OR LOAD'	T	RMK_LDFG		
' ADDRESS OF				
SUBSTITUTE				
FOR 'LOOP' I				
N TTY TROUBL				
E MESSAGE'	T	RMK_LOOPSUB		
' ALL-SEEMS-				
WELL SIGNAL				
NOT RECEIVED				
FROM MODULE				
(FOB) ACCESS				
ED DURING NO				
RMAL CYCLE'	T	RMK_MODER		
' MULTIPLEXO				
R ERROR DETE				
CTED BY CHEC				
K BOARD'	T	RMK_MPXER		
' ADDRESS O				
F MY STORE S				
UBCHANNEL O'	T	RMK_MSSCO		
' ADDRESS OF				
MY STORE SU				
BCHANNEL 1'	T	RMK_MSSC1		
' ADDRESS OF				
MY STORE SU				
BCHANNEL 2'	T	RMK_MSSC2		
' ADDRESS OF				
MY STORE SU				
BCHANNEL 3'	T	RMK_MSSC3		
' REPEAT PAS				
S THRU TEST				
INDICATOR'	T	RMK_PASBT		
' PARITY HIG				
H VALUE READ				
BACK'	T	RMK_PHBK		
' PARITY LOW				
VALUE READ				
BACK'	T	RMK_PLBK		
' ERROR IN P				
ARITY FOR WI				
DE STORE'	T	RMK_PWER		
' STORE REFR				
ESH STOP'	T	RMK_REFST		

CDGSHW

W77D

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET

CDGSHW

ISSUE 05

PAGE 135

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
' ALL MEMORY MODULES (FDB S) NOT SELEC TED DURING R EFRESH'	T	RMK_RSELER		
' REFRESH SE LECTS FROM F ANOUT BOARDS 0-6'	T	RMK_RSELD6		
' REFRESH SE LECT FROM FA NOUT BOARD 7'	T	RMK_RSEL7		
' SD7,SD15 I SOLATE TEST RESULT - ONL Y GATED INTO BY LOAD I/O DECODER CHE CK (LOADCHK) OPTION'	T	RMK_RSVD0		
' RESERVED - FOBTERA IS SET AFTER IN IT'	T	RMK_RSVD1		
' STORE ADDR ESS PARITY H IGH LOOP RES ULT'	T	RMK_SAPHLP		
' STORE ADDR ESS BIT 17 L OOP RESULT'	T	RMK_SA17LP		
' PREMATURE STORE COMPLE TE(SCH)'	T	RMK_SCHER		
' RESULT OF STORE DATA P ARITY ISOLAT ION'	T	RMK_SDPCK		
' ERROR IN M AIN SHIFTER OPERATION'	T	RMK_SHER		
' SINGLE BIT ERROR FLAG'	T	RMK_SNGBTER		
'	T	RMK_SFARE		
' 4/8 MAINTEN ANCE STATE CODE'	T	RMK_STORDER		
' STORE SELE CT ADDRESS B				

CD6SMP

W77D

STORE WRITE PROTECT TEST

PR-1C927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CD6SMP

ISSUE 05 PAGE 136

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSHW	W77D
ITS LOOP RES						
ULT'	T	RMK_STRSLP				
' ERROR DETE						
CTED ON TIMI						
NG BOARD'	T	RMK_TBER				
' SAVE TIMIN						
G CONSTANT F						
OR TIMOUT SU						
BROUTINE'	T	RMK_TMSAV				
' DIAGNOSTIC						
TEST NUMBER						
REQUESTED'	T	RMK_TSTNUM				
' ADDRESS OF						
NEXT BLOCK						
OF MEMORY TO						
BE UPDATED						
AFTER MEMORY						
PATTERN TES						
T'	T	RMK_UPADDR				
' RESULTS OF						
WIDE DATA(S						
D16-23) ISOL						
ATE'	T	RMK_WDISOL				
' ADDRESS OF						
OTHER STORE						
SUBCHANNEL						
0'	T	RMK_OSSC0				
' ADDRESS OF						
OTHER STORE						
SUBCHANNEL						
1'	T	RMK_OSSC1				
' ADDRESS OF						
OTHER STORE						
SUBCHANNEL						
2'	T	RMK_OSSC2				
' ADDRESS OF						
OTHER STORE						
SUBCHANNEL						
3'	T	RMK_OSSC3				
WIDE STORE						
INDICATOR B						
IT'	T	RMK_OWDSTRO				
' 0-10 BIT T						
IMING SHIFTE						
R TAKE'	T	RMK_O10TM				
' RESULT OF						
EXTENDED(3 B						
IT) PARITY I						
SOLATE'						
T	T	RMK_2EPCK				

STORE WRITE PROTECT TEST

PR-10927-50

0:06:56 2/06/81 TRADE SECRET - SEE TRADE SECRET RESTRICTIVE NOTICE ON COVER SHEET CDGSHW ISSUE 05 PAGE 137

TROUBLE LOCATION MANUAL

0:06:56 2/06/81 ****

VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSWP	W77D
0010177	A	RSELBTS	14-22	14-23		
0167600	A	RSELBTSN	14-23			
'SER+0'		T RSELER	W=1	S=6 N=0 CL=2		
'RSLCHK+0'		T RSEL06	W=7	S=0 N=0 CL=2	14-22	
'RSLCHK+0'		T RSEL7	W=1	S=14 N=0 CL=2		14-22
'CHKWRD+0'		T RSVDO	W=1	S=7 N=0 CL=2		
'RSLCHK+0'		T RSV01	W=1	S=7 N=0 CL=2		
0047214	A	RTNADHI	21-04			
'LOAD SAT1 &						
SAPH INTO S						
ER'		T RTNADMIT				
'DGSWP'		T RTNAME				
0000261	A	RTNMCHB				
D R RD						
			LIBNUM=15	64-20, 67-29, 73-36, 79-15		
			LIBNUM=3	7-12, 24-44, 26-42, 29-20, 30-36, 30-43, 30-46, 31-40, 32-06, 33-47, 34-05, 34-08, 35-25, 36-13, 37-01, 37-04, 38-14, 38-27, 43-44, 46-07, 46-14, 46-17, 47-03, 50-26, 50-38, 50-45, 50-48, 51-37, 55-25, 55-32, 55-35, 55-44, 61-44, 63-38, 63-39, 64-14, 64-15, 64-20, 64-41, 64-43, 64-44, 64-45, 65-04, 66-45, 66-46, 67-23, 67-24, 67-26, 68-04, 68-06, 68-07, 68-08, 68-13, 68-14, 68-15, 68-20, 72-49, 73-01, 73-30, 73-31, 73-36, 74-09, 74-11, 74-12, 74-13, 74-18, 74-19, 74-20, 74-25, 78-31, 78-32, 79-09, 79-10, 79-15, 79-20, 81-43, 81-46, 81-49, 82-06, 82-09, 82-13		
			LIBNUM=15	82-20		
0000123	A	ROKF				
1 R R1			LIBNUM=3	7-13, 30-37, 30-38, 30-39, 30-42, 30-43, 30-44, 30-45, 33-48, 33-49, 34-01, 34-04, 34-05, 34-06, 34-07, 36-44, 36-45, 36-46, 36-49, 37-01, 37-02, 37-03, 46-08, 46-09, 46-10, 46-13, 46-14, 46-15, 46-16, 50-39, 50-40, 50-41, 50-44, 50-45, 50-46, 50-47, 55-26, 55-27, 55-28, 55-31, 55-32, 55-33, 55-34, 64-42, 64-43, 64-45, 68-05, 68-06, 68-08, 74-10, 74-11, 74-13, 81-39, 81-41, 81-44, 81-47, 82-05, 82-06, 82-07, 82-08		
			LIBNUM=15	7-14		
0000125	A	R1XT				
14 R R12			LIBNUM=3	7-23, 26-34, 28-33, 28-45, 30-36, 30-41, 30-45, 30-46, 33-31, 33-40, 33-47, 34-03, 34-07, 34-08, 34-36, 34-49, 36-43, 36-48, 37-03, 37-04, 37-24, 37-30, 45-40, 45-48, 46-07, 46-16, 46-17, 49-38, 49-47, 50-12, 50-24, 50-38, 50-43, 50-47, 50-48, 54-37, 54-46, 55-09, 55-25, 55-30, 55-34, 55-35, 63-30, 64-03, 64-40, 64-44, 66-39, 67-01, 67-12, 68-03, 68-07, 72-38, 73-05, 73-19, 74-08, 74-12, 81-28, 81-49, 82-04, 82-08, 82-09, 82-31		
			LIBNUM=3	7-24, 26-35, 28-34, 28-46, 30-38, 30-39, 33-32, 33-41, 33-49, 34-01, 34-41, 35-01, 36-45, 36-46, 37-25, 37-31, 45-41, 45-49, 46-09, 46-10, 49-39, 49-48, 50-13, 50-23, 50-40, 50-41, 54-38, 54-47, 55-10, 55-21, 55-28, 63-31, 64-04, 64-38, 66-40, 67-13, 67-42, 72-39, 73-20, 74-01, 81-29, 82-01, 82-02, 82-06, 82-32		
			LIBNUM=3	28-43, 33-38, 34-47, 37-28, 45-45, 49-45, 50-10, 50-21, 54-44, 63-49, 67-04, 73-09, 78-38, 78-49		
16 R R14			LIBNUM=3	26-36, 28-44, 29-04, 31-05, 33-39, 34-48, 35-08, 37-10, 37-29, 45-46, 46-23, 49-46, 50-11, 50-22, 51-31, 54-45, 64-01, 67-05, 73-10, 78-39, 79-01, 82-11		
			LIBNUM=3	7-15, 28-43, 33-40, 34-49, 37-30, 45-48, 49-47, 50-12, 50-24, 54-46, 55-09, 64-03, 67-01, 67-12, 73-05, 73-19, 78-40, 79-02, 81-28		
3 R R3			LIBNUM=3	7-16, 28-46, 29-08, 31-10, 33-41, 35-01, 35-13, 37-15, 37-31, 45-49, 49-48, 50-13, 50-25, 54-47, 55-10, 55-17, 64-04, 64-27, 67-02, 67-13, 67-36, 73-06, 73-20, 73-44, 78-41, 79-03, 81-29, 81-36		
			LIBNUM=3	7-17, 24-28, 24-29, 28-35, 31-30, 33-33, 34-21, 34-42, 38-04, 43-28, 43-29, 45-38, 46-19, 49-40, 51-12, 51-18, 54-39, 55-37, 61-28, 61-29		
5 R R5			LIBNUM=3	7-18, 81-24, 82-01, 82-02		
6 R R6			LIBNUM=3	7-19, 28-47, 33-42, 35-02, 37-32, 46-01, 49-49, 50-14, 50-23, 54-48, 55-11,		

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSWP	W770
7 R R7				64-05, 78-42, 79-04, 81-30 LIBNUM=3 7-20, 28-42, 33-37, 34-46, 37-27, 45-44, 49-44, 50-09, 50-20, 54-43, 55-08, 63-48, 67-03, 67-14, 73-07, 73-21, 78-37, 78-48, 81-27		
10 R R8				LIBNUM=3 7-21, 7-22, 26-33, 29-03, 31-04, 35-07, 37-09, 46-22, 51-26, 81-36, 81-44, 81-47		
11 R R9				LIBNUM=3 28-37		
CTVTAB	Y	SZMCH		LIBNUM=7 64-22, 67-31, 73-38, 79-17		
14 P	SZMCH	XCSYS		UB LIBNUM=7		
'RSLCHK+0'	T	SAPHL		W=1 S=10 N=0 CL=2		
'RSLCHK+0'	T	SA17LP		W=1 S=11 N=0 CL=2		
'SER+0'	T	SCMER		W=1 S=3 N=0 CL=2		
'CHKMRB+0'	T	SDPCK		W=1 S=14 N=0 CL=2		
0001275	A	SERNO_047325	83-02			
0001301	A	SERNO_047756	83-16			
0001305	A	SERNO_049898	83-26			
0047114	A	SERREAD	21-09			
'READ BACK S						
TONE ERROR R						
REGISTER(SER)	T	SERREADT				
'SER+0'	T	SHER		W=1 S=4 N=0 CL=2		
CDGNM	Y	SLOMCHBF	3-42			
CYSUB	Y	SLOMIRL	63-41	63-42, 64-17, 64-18, 66-48, 66-49, 67-26, 67-27, 73-03, 73-04, 73-33, 73-34, 78-34, 78-35, 79-12, 79-13		
CDGNM	Y	SLOMIRLF	3-43			
CYSUB	Y	SMCH	64-21	67-30, 73-37, 79-16		
CDGNM	Y	SMCHF	3-44			
'DBREQLO+0'	J	R SNGBTGR	15-07	W=1 S=5 N=0 CL=1		
0044714	A	SPAREA	21-07	W=2 S=7 N=0 CL=2		
'SPARE I/O 0						
RDR	T	SPAREAT				
0106274	A	SPRRD	17-32	55-08		
0106214	A	SPWRV	17-34	50-20		
'MXAS'	T	SPWORD				
0000002	A	STEPCLK	21-45			
0000010	A	STOPREF	21-47			
'C10BUP+0'	T	STORDER		W=10 S=4 N=0 CL=2		
TDATA	Y	STALH	6-41			
CDGSIO	Y	STASIZE	6-22			
'RSLCHK+0'	T	STRSLP		W=1 S=12 N=0 CL=2		
J R	STRSTAT		7-16	15-03, 15-04, 15-06, 15-07, 15-08		
0041634	A	STSBY	21-11			
0041630	A	STSBYCL	21-13			
'SET STORE B						
USY(SBY) W/						
CLOCK'	T	STSBYCLT				
'SET STORE B						
USY(SBY) SIG						

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSWP	W770
NAL	T	STSBYT				
CDG5IO	V	STSELMSK	6-23	30-42, 34-04, 36-49, 46-13, 50-44, 55-31, 64-41, 68-04, 74-09, 82-05		
0000061	A	STWP1		LIBNUM=16 22-11		
0000062	A	STWP2		LIBNUM=16 40-14		
0000063	A	STWP3		LIBNUM=16 58-14		
0000000	A	SUCCESS	26-45	26-48, 27-11, 27-14, 27-26, 27-29, 29-23, 29-26, 29-38, 29-41, 30-03, 30-06, 30-18, 30-21, 32-09, 32-12, 32-24, 32-27, 32-39, 32-42, 33-05, 33-08, 35-28, 35-31, 35-43, 35-46, 36-10, 36-13, 36-25, 36-28, 38-30, 38-33, 38-45, 38-48, 39-11, 39-14, 39-26, 39-29, 47-06, 47-09, 47-21, 47-24, 47-36, 47-39, 51-40, 51-43, 52-10, 52-13, 52-25, 52-28, 52-40, 52-43, 56-01, 56-04, 56-16, 56-19, 56-31, 56-34, 65-07, 65-10, 65-22, 65-25, 68-23, 68-26, 68-38, 68-41, 69-04, 69-07, 69-19, 69-22, 69-34, 69-37, 70-04, 70-07, 70-19, 70-22, 70-34, 70-37, 74-28, 74-31, 74-43, 74-46, 75-10, 75-13, 75-25, 75-28, 75-40, 75-43, 76-10, 76-13, 76-25, 76-28, 76-40, 76-43, 77-10, 77-13, 77-25, 77-28, 79-23, 79-26		
0000000	A	SV REG		W=1 S=13 N=0 CL=2		
'SER+0'	T	BER				
0000063	A	TESTNO	22-11	40-14, 58-14, 84-01, 91-22, 98-20		
0116774	L	TFAPCH2	2-27			
0000003	A	THREE	17-05			
'PAGSCR+27'	T	TMSAV		W=20 S=0 N=33 CL=2		
0000061	A	TLWFRST	5-01	22-11, 84-01		
0600000	L	TPATCH	2-29			
0001275	A	TR_012706	83-02			
0001301	A	TR_012736	83-16			
0001305	A	TR_012988	83-26			
0001244	A	TR_12706	24-02	40-02, 61-02, 80-02		
0001027	A	TR_12736	43-02	58-02		
0000761	A	TR_12988	31-18	31-28, 34-10, 34-21, 37-38, 38-02, 46-25, 46-35, 51-01, 51-12		
06 0027113	L	TRORG	24-02	31-18, 34-10, 37-38, 40-02, 43-02, 46-25, 51-01, 58-02, 61-02, 80-02		
'DGREGL0+0'	T	TSTNUM		W=7 S=0 N=0 CL=2		
0	T	TTYTBL				
0000002	A	TWO	17-06			
'A'	T	TXSTEG				
'PAGSCR+28'	T	UPADDR		W=4 S=0 N=34 CL=2		
CSTSUB	V	UPD OTS	6-33			
06 0025052	L	UPDTXT	82-10	82-03		
06 0025264	L	UPWPAD0	30-35	29-14		
06 0025504	L	UPWPAD1	36-42	35-19		
0007114	A	USERRED	21-15			
'READ STORE						
ERROR REG (W						
/O ISOLATE)'	T	USERREDT				
CTVTAB	V	WXAIT		LIBNUM=7 31-29, 34-28, 38-03, 46-36, 51-16, 64-37, 67-41, 73-49		
14 P	V	WXAITX_XCBLM		LIBNUM=7		
CBLM	V	WAIT	6-07			
'CHKWRD+0'	T	WDISOL		W=4 S=10 N=0 CL=2		
TDATA	V	WDSTR	6-42			
0010000	A	WPKLSZE	17-07	64-38, 67-42, 74-01		
0000014	A	WPB12SA0	102-24	68-48, 102-24		
0000015	A	WPB12SA1	103-01	69-14, 103-01		

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES
0000016	A	WPB13SA0	103-13	69-29, 103-13
0000017	A	WPB13SA1	103-25	69-44, 103-25
0000020	A	WPB14SA0	104-01	70-14, 104-01
0000021	A	WPB14SA1	104-13	70-29, 104-13
06 0026325	L	WPCKLP0	63-34	64-39, 64-46
06 0026444	L	WPCKLP1	64-41	67-45, 68-09
06 0026627	L	WPCKLP2	72-45	74-04, 74-14
06 0026372	L	WPCKOK0	64-30	64-28
06 0026514	L	WPCKOK1	67-39	67-37
06 0026701	L	WPCKOK2	73-47	73-45
06 0026376	L	WPCKOND	64-35	64-33
0000002	A	WPCKSTK1	99-01	65-17, 99-01
06 0026320	L	WPCKTST0	63-29	63-27
06 0026437	L	WPCKTST1	66-36	66-34
06 0026622	L	WPCKTST2	72-35	72-33
06 0027021	L	WPCKTST3	78-27	78-25
06 0025352	L	WPCKOKT	33-20	31-40
0046061	A	WPCLR	21-17	
'STORE INITI				
ALIZE, INCL.				
WRITE PROTE				
CT	T	WPCLRT		
0000024	A	WPDRFL	90-23	29-33, 35-38, 90-23
0000043	A	WPENNG	110-25	77-35
0000043	A	WPENNG00	110-25	
0000044	A	WPENNG01	111-01	
0000045	A	WPENNG02	111-12	
0000046	A	WPENNG03	111-23	
0000047	A	WPENNG04	112-01	
0000050	A	WPENNG05	112-12	
0000051	A	WPENNG06	112-23	
0000052	A	WPENNG07	113-01	
0000025	A	WPIDFL	91-01	32-19, 38-40, 91-01
06 0025666	L	WPHMCK	45-31	45-29
06 0025733	L	WPNMBX	46-18	46-11
06 0025700	L	WPNMLP	45-42	46-19
06 0025415	L	WPONBX1	34-13	34-02
06 0025362	L	WPONLP1	33-35	34-21
06 0025301	L	WPORCK0	31-03	30-40
06 0025521	L	WPORCK1	37-08	36-47
06 0025131	L	WPRCK0	26-29	26-25
06 0026222	L	WPRDBX	55-36	55-29
06 0026137	L	WPRDCK	54-33	54-31
06 0026224	L	WPRDFL	55-41	55-18, 55-21, 55-24
06 0026146	L	WPRDLP	54-41	55-37
06 0026251	L	WPRDXT	57-06	57-04
06 0025171	L	WPRWCK0	28-32	28-28
06 0025355	L	WPRWCK1	33-30	33-24
06 0025175	L	WPRWLP0	28-36	31-30

CDGSWP

W770

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSWP	W770
06	0025423	L WPRMLP1	34-44	38-04		
06	0025614	L WPRWXT	39-39	38-14		
	0000033	A WPSEG0S1	108-01	75-05, 108-01		
	0000034	A WPSEG1S1	108-13	75-20, 108-13		
	0000035	A WPSEG2S1	108-25	75-35, 108-25		
	0000036	A WPSEG3S1	109-01	76-05, 109-01		
	0000037	A WPSEG4S1	109-13	76-20, 109-13		
	0000040	A WPSEG5S1	109-25	76-35, 109-25		
	0000041	A WPSEG6S1	110-01	77-05, 110-01		
	0000042	A WPSEG7S1	110-13	77-20, 110-13		
	0000002	A WPSLC	92-01	27-06, 29-48, 32-34, 36-05, 39-06, 47-16, 52-20, 56-11		
	0000023	A WPSLCPH	97-23	27-36, 30-28, 33-15, 36-35, 39-36, 47-46, 53-05, 56-41, 90-12, 97-23		
	0000022	A WPSLCPL	97-12	27-21, 30-13, 32-49, 36-20, 39-21, 47-31, 52-35, 56-26, 90-01, 97-12		
	0000002	A WPSLC00	84-18	92-01		
	0000003	A WPSLC01	85-01	92-12		
	0000004	A WPSLC02	85-12	92-23		
	0000005	A WPSLC03	85-23	93-01		
	0000006	A WPSLC04	86-01	93-12		
	0000007	A WPSLC05	86-13	93-23		
	0000010	A WPSLC06	86-29	94-01		
	0000011	A WPSLC07	87-01	94-12		
	0000012	A WPSLC08	87-12	94-23		
	0000013	A WPSLC09	87-23	95-01		
	0000014	A WPSLC10	88-01	95-12		
	0000015	A WPSLC11	88-12	95-23		
	0000016	A WPSLC12	88-23	96-01		
	0000017	A WPSLC13	89-01	96-12		
	0000020	A WPSLC14	89-12	96-23		
	0000021	A WPSLC15	89-23	97-01		
	0000022	A WPS0BS	104-25	70-44		
	0000022	A WPS0BS00	104-25			
	0000023	A WPS0BS01	105-01			
	0000024	A WPS0BS02	105-14			
	0000025	A WPS0BS03	105-27			
	0000026	A WPS0BS04	106-01			
	0000027	A WPS0BS05	106-14			
	0000030	A WPS0BS06	107-01			
	0000031	A WPS0BS07	107-14			
	0000003	A WPS1BS	99-23	65-32		
	0000003	A WPS1BS00	99-23			
	0000004	A WPS1BS01	100-01			
	0000005	A WPS1BS02	100-12			
	0000006	A WPS1BS03	100-23			
	0000007	A WPS1BS04	101-01			
	0000010	A WPS1BS05	101-12			
	0000011	A WPS1BS06	101-23			
	0000012	A WPS1BS07	102-01			
	TDATA	V WPTBL	6-43			
06	0025002	L WPTST	2-16	26-38, 29-06, 31-08, 35-10, 37-12, 46-38, 51-33		

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VALUE	T	NAME	DEF/REF	ATTRIBUTES AND REFERENCES	CDGSMW	W77D
06 0025006	L	WPTSTLP	81-25	82-11		
06 0025055	L	WPTSTXT	82-15	81-37, 81-45, 81-48		
06 0026075	L	WPWTBX	51-04	50-42		
06 0025767	L	WPWTCK	49-34	49-32		
0000024	A	WPWTLF	98-01	52-05, 98-01		
06 0025776	L	WPWTLF	49-42	51-18		
06 0025072	L	WP1INIT	24-05			
06 0025627	L	WP2INIT	43-05			
06 0026261	L	WP3INIT	61-05			
0025750	A	ZERX		LIGNUM=15 63-38, 66-45, 72-49, 78-31		
0000000	A	ZERO	17-08	78-49, 79-27		
0000000	A	ZEROS	17-09	34-47, 50-10, 50-21, 50-22		
0026750	A	ZHINTX		LIGNUM=15 82-26		
		U OF				
'MASC10SC+1'	T	OSSCO		W=20 S=0 N=1 CL=2		
'MASC10SC+3'	T	OSSC1		W=20 S=0 N=3 CL=2		
'MASC10SC+5'	T	OSSC2		W=20 S=0 N=5 CL=2		
'MASC10SC+7'	T	OSSC3		W=20 S=0 N=7 CL=2		
0000000	A	OTEST	17-10			
		R OWDSTRO	15-06	W=1 S=4 N=0 CL=1		
0052354	A	O10NOR	21-19			
'0-10 TIMING						
(O10TIM) THEN						
REFRESH REQ						
UEST 'CLEAR'	T	O10NORT				
0054334	A	O10REF	21-22			
'0-10 TIMING						
(O10TIM) THEN						
REFRESH REQ						
UEST SET'	T	O10REFT				
0056074	A	O10TIM	21-25			
'FORCE 0-10						
TIMING SIGNA						
L ACTIVE'	T	O10TINT				
'C10BUF+0'	T	O10TM		W=1 S=14 N=0 CL=2		
0000001	A	1TEST	17-11			
'CHKWRD+0'	T	2EPCK		W=1 S=15 N=0 CL=2		
		1 J 3ACC	1-09			
		U 7F				

NO FLAG(S) FOUND IN THIS ASSEMBLY

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